Introductory Lecture

DELIVERED AT

GUY'S HOSPITAL,

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MR. PRESIDENT AND GENTLEMEN,—Mine is a pleasant task. For no one who stands here to repeat the welcome with which this hospital greets, year by year, the youths who seek access to her can fail to feel profoundly at once the honour and the pleasure of his work—a pleasure, I may add, that no sense of incompetence can banish. Standing in the name of Guy's Hospital, her governors and staff, to speak, no man need regret his inability worthily to tell her story. She has better witness than any voice could supply—the witness of facts accomplished in the past and constantly repeated in the present.

Gentlemen, if your ambition lies in the peaceful path of the healer of disease, the unraveller of Nature's secrets; if the triumphs that you seek are those which are won by patient toil at the bedside of sickness, undisdainful of the garret or the cellar if human need have made them holy—triumphs of a skill made quick by sympathy, of a sympathy made a reality by skill,—it is enough to say to you that you are members even now of Guy's Hospital; that her historic nobleness, graced by so many illustrious names, enfolds you; that her resources, by which, when incomparably less rich than now, so many men have been trained to greatness, are at your service. And while our thoughts recall in a rapid survey the names of which Guy's Hospital is proud, assuredly they rest on none with a deeper satisfaction than on that of the physician who has so recently, to the regret of all, resigned the post he has so long adorned. Of those unwearied labours which in past years rendered the name of Owen Rees identical with all that was most profound and helpful in the application of chemistry to pathology and practice it is not for me to speak; but it is known to all how deep is the debt which science owes to them, most heartily acknowledged as it is by those most capable of judging of their worth. How rich and deep is the stream of life that runs through this hospital may best be evidenced, perhaps, by the men it loses from its outward ranks, and yet lives on no less vigorous and strong. But, indeed, they are not lost, for their love is as deep as ever; nor would their service, if it were claimed, be less ungrudging.

But Guy's Hospital gives to you more than a past glory, a present privilege; her honour in the future she commits also to your hands. To-day gathering to her, to receive what of instruction she has to bestow, it will not seem to you so long before you stand as the distributors of her blessings to the world. In you and by you she will live. She will be but what you will make her. Out of your ranks must come the men who shall sustain (it will be sure to be sustained) the honour of the past—nay, of the present; worthy successors of the men to whom now your admiration is so justly given, to whom you will so rightly feel it a privilege to listen, but whom here I must not name. Even more still, by you must be sustained (and will be) that wider, deeper, and higher honour of Guy's Hospital, which depends not on the eminence and fame, however great and well deserved, of a few, but on the good, faithful—yes, and most highly skilful and splendid, though often little known or applauded—work done by the men of Guy's in every land.

For it is the true glory of this hospital that it has, for generation after generation, placed (as it will place you), wherever sorrow and suffering dwell, a mass of truthful, honest, able men, who have willingly let pass no opportunity of becoming true blessings to their fellows in pain and weakness. She has done her part (and will do it yet again in you) in binding all the world in one electric chain of service. As you look round on one another, you are greatly strangers now; but there is a potent magic in these walls: hence you will go forth an army, a band of brothers, pledged that through you the weight of human sorrow shall be lightened.

There is one spectacle that the past has sometimes seen. Let us record it, lest the future be incredulous; justly incredulous—nay, indignant at the slander. For it was a creature in the shape of a man; and it bore in its right hand a diploma, obtained by pretence of study—a certificate of cunning and deceit. Forth over the earth it walked, a more malignant pestilence: disease itself endowed with will, made powerful to cheat; enriching its armoury of destruction with lies. It has said to the sick and suffering, "Look to me"; and has let them perish, or guided them to a speedier grave. It has made murder its amusement, and thrust its reddened hand into the pinched pocket of the widow; shaming the thief by meaner robbery. But I am wandering from my subject. I was thinking of the times when there could be found men base enough deliberately to mean to say to their sick fellows, "Put your trust in me," and to deceive them with sham knowledge;—of times when men, or things that might be mistaken for them, could come even to an institution like this, where such historic memories challenged their emulation, where misery in every form of pathos appealed to their compassion, and could give to time spent in indolence or riot the name of pleasure.

Very far, indeed, I have wandered from my subject; which is—You, gentlemen, and your studies. For you come here to a feast, than which feast more splendid was never spread before man. In its chief epitome—the human frame—all Nature spreads herself before you, and invites your gaze. As your eye scans the list of subjects you have to master, you might feel disposed to count their number a burden, and wish (without being chargeable with indolence) that your labours might be restricted to a narrower range. But it would be a fatal wish. The extent of the sciences the first principles of which we are challenged to understand is the glory of our art; for it means that it is rooted deep in Nature, and insists on pursuing to the utmost the sources of every fact that comes within its cognisance.

And even now, while we meet, the bounds of medical science are enlarging. Almost we may see them expanding day by day, and making tributary fresh domains of knowledge. Not only chemistry, botany, zoology—these have been long its servants,—but new domains of physics, molecular and other, of the science of electric currents, and of heat; problems of the first dawnings of life—for the question of the dependence of putrefaction upon the presence of germs owes its interest and its passionate pursuit to Medicine;—all these are drawn into the widening vortex of our studies. Further still: the structure of the earth is bidden to reveal what part it plays in the production of disease; nor does the geologist touch a stratum too deep, or too remote, for the physician to have an interest in his researches. The explorers of the deepest sea-bottom aid him in the study of respiration; the student of storms for him discovers ozone; and the spectroscope, we may be sure, will not have done its work till the study of the remotest star lays its offering at the feet of the healer of disease. We have—or, in the person of the physician of the future, shall have—an interest in the colours Sirius flashes back to the patient eye of the astronomer; for they will tell us of our own surroundings. Nay, the milky way itself becomes our servant, and bids us see in its forms of beauty, winding in spiral clusters through infinitude, the very image of the living forms we question with half-hopeless curiosity beneath the highest powers of our microscopes. The physicians are, as it were, the hands of man—of all creatures the most full of needs, and by his needs crowned ruler of them all,—his hands, stretched forth to gather from every quarter, aid for his infirmities, resources for his weakness. And every science is a hand stretched forth in answer.

But that is the worst of it. It is (as a great American, a physician also, says) like shaking hands with Briareus. To invite the universe into our dwelling is to run great risk of being turned out of doors ourselves.

But this is not all. It is not the physical world alone that the physician has to explore to its utmost bounds; the other world of the human mind and its emotions no less claims his study. Not only those among you who will devote yourselves to the treatment of mental disease will be called upon to trace out the mutual interworkings of mind and body, and note with the utmost delicacy we can attain the points at which a bodily disorder begins to react on the

emotions; or where a mental shock or strain, or worry too much succumbed to, reveals itself in impaired functions of the body;—this is the common duty of us all, and one which acquires daily a greater urgency.

More than ever now the medical man becomes, or should become, the friend, the confidant, the counsellor of his patient. A place too seldom filled by him, yet impossible to be filled except by him, stands vacant—that of a friend whose trained knowledge and quick sympathy should be able to unravel for each man and each woman, in these perplexed and restless days, what is merely physical, what mental, in their distresses; where a simple impaired digestion fills the mind with morbid phantoms, and where an unwise or excessive care makes discord in the delicate harmony of the nerves, and sends perverted currents to every organ.

More than ever now the physician must have knowledge of the soul; must feel, with finer senses, other pulses; and measure heats and chills which no thermometer can gauge. The mind, the burning passions, are his study; unwitting of these, or unregardful, half his work—often the larger half—is unperformed. Calm himself, he must for his fellow know ambition and despair; must feel how fiercely burns desire, and with what a leaden weight failure seals up the springs of life. Into the depths of another man's remorse he must enter, or how can he know how it corrodes the frame, and turns the healing waters themselves to bitterness? And his soul, too, must thrill with another's joy, lest he ascribe fancied powers to his drugs, and turn the very gladness of one man to the mortal damage of another. For who will tell us how much medicine has suffered by false virtues ascribed to remedies, because, perhaps, the doctor has wrapped up hope with his pills, or a sudden gladness has turned into the very elixir of life an ordinary draught?

But not even then is our full task accomplished. As students of the mind as well as the body, we approach man under a new aspect. He is no more a mere series of disconnected units, each of which may be adequately regarded by itself. In his intellectual and moral nature man reveals himself as a being of a different order: a wider unity dawns upon us. In science, in art, in social order, and in moral life, man lives on from age to age: he grows, develops, rises through lower into higher forms. Nor have watchful eyes been wanting to note the parallel which this life of consciousness affords to the history of bodily development. This Man, who thinks from age to age more truly and feels more widely, establishes society, and lays down and changes laws,—he, too, is an organic being; and the science of his life and growth opens before us a new and larger physiology. In the central government and its agents we see again the brain and nerves; in the producers of commodities and those who distribute them, down to the smallest retail dealer, there stand before us a transfigured digestive and circulatory system. We cannot, if we would, refuse the parallel; and, indeed, it fascinates us by its interest. We look back to the history of the body politic, and note how, in its earliest form—like the earliest form of the other body—it is an undistinguished mass, every element in which performs functions that are the same; how by degrees, owing to increasing wants and varying relations, special portions of the body, or the society, assume special functions, and, as the special aptitudes develop, become unfitted for the rest; how these specially organised parts are brought into more and more complex union, and become mutually more and more dependent: one life working visibly through the varied whole, and finding its organs created ready to its hand.

If the structure of the lower creatures claims our study, and we feel that we cannot expect to understand aright the human frame unless we know also these less perfect forms, how can we withhold our study from this grander life arising thus before our eyes, and in the progress of which we and our own efforts are tributary powers? What would we not give to see an "ultimate atom" with our microscopes? But, behold, we ourselves are the very atoms we explore; and the mysterious forces which attract them and repel, we feel: they group our fellow-men around us, and our responsive energies reveal to us their power.

So we are swept on, even beyond our goal: we cannot stop where we would. This wonderful frame of man's, which is our special business, is no end; it floats, as it were, on a larger stream, to which we must commit ourselves if we would grasp it rightly. Could we know *one* molecule of our own frame, and its diseases, if we ignored the life it served or marred? How then these atom-minds and bodies of our fellows, save by knowledge of the life they help to constitute?

This is no novelty. "The science of medicine," says the physician in Plato's "Banquet," "is, in a word, a knowledge of the love affairs of the body; and he is the most skilful physician who can trace these operations of the good and evil love, can make the one change places with the other, can attract love to those parts in which he is absent, and expel him from those which he ought not to occupy. Our progenitor, Æsculapius, through the skill which he possessed to inspire love and concord in these contending principles, established the science of medicine."

Very far has the science drifted since those days from thoughts like these, and many theories, mechanical and chemical, have sought to explain the mysteries of normal and abnormal life; but the last thoughts of science bring back to us an echo of the words.

All things solicit us. Of course they do. We have aspired to take life for our domain. Does it surprise us to find it boundless?—Let us look into this matter a little more closely.

In all your studies, scarcely anything will give you a keener or more legitimate pleasure than when your physiological lecturer conducts you through researches—many of them the fruits of his own zeal—which will show you some of the most mysterious results of life resolved into simple physical or chemical processes—processes which you may see carried on outside the body. You will feel a pride, almost as of a victory gained, on seeing the hard-drawn line between the organic and the inorganic efface itself before your eyes; as if plain and demonstrable laws of physics were destined to illume for you the darkest recesses of the world of life. And (as it seems to me at least) this process *is* destined to go on until all that has been deemed distinctive of life has been included under the inorganic laws. But let this task have been achieved, shall we have resolved life into physics? Rather physics will have revealed itself as life.

If there is nothing more in all the powers of the living world than is contained in the forces and relations of the world around, and that seems so much inferior, what we shall have learnt will be that this inferior world is more than we had taken it for. Assuredly out of nothing nothing comes; most certain of all things is it that deadness does not give birth to life.

Let us but disprove the fiction of a vital force endowed with powers other than those of the universal force, and we have achieved a triumph worth achieving over our own ignorance and false impressions. We have demonstrated that there is no dead world, that the seeming of it is an illusion of our sense. The false distinction that has been drawn shows how our partial seeing had deceived us.

Of this we have other instances. What seems plainer to us than the unity of motion in every place, and under every form? But to the Greeks—looking at motion as it is presented to the sense—it seemed not one, but diverse. To them the motions seen in the heavens, never ceasing in their course, were incorruptible; the terrestrial motions, always ceasing after a longer or shorter time, were corruptible. Because they had not learnt to see that the motions that ceased also went on unceasingly, they divided the motion we know to be one into two, and called them immortal and perishing, living and dead. They judged by sense. But even so do we judge when we divide the one world around and within us into two, and call them organic and inorganic, living and dead. All motion is incorruptible; unceasing, though its form perpetually changes, and baffles so the uninstructed eye. All nature is living, though only here and there can our eye penetrate its secret, and our uninstructed sense misleads us to ascribe to it those properties merely which its narrow powers can discern. What mattered it that—to our fathers' belief—every terrestrial motion ceased? The unceasing motion in the heavens bore silent witness that motion is a deathless thing; and the lagging intellect of man has risen, even with us, to abjure the thought that things that are different to our senses cannot be the same. Even so does the life we recognise bear continual witness (to which our ears cannot be deaf much longer) that life is absent nowhere. What matters it that we have dreamt of dead mechanical relations?

Nature is simple, with the grand simplicity that we call necessity—a perfect intellectual order; but the falsely simple things, that are simple by mere poverty of being, owe their seeming simplicity to lack of perception on our part; and one of the chief benefits the study of physiology confers on man is that it helps him to rise to a truer vision of the whole.

It is easy, however, to see why nature has been recognised as living only in certain forms. If we examine these forms, we find that in them a process that is universal is presented to us in a peculiar manner. In the organic world we see wholes; in all else we see but fragments. Wherever in nature we see the relations of force complete, there we tend to recognise life. For all action in nature has this character—that it comprises equal opposites. Wherever any action begins an equal action ceases; every process has for necessary accompaniment an opposite process that is its complement, and leaves the total relations of force unchanged.

Now in the organic world this relation is presented visibly to our eye. The opposite actions are bound up together in a continuous series, each generating the other within a limited space, and maintaining by their sequence within those limits a perpetuity of movement. The organic differs from the inorganic by the *limit* applied to the transference or distribution of force; so that the correlated opposites pass in a circle so contracted that our eye can follow them, and see that there is no break, no ceasing. It is the same in the inorganic; but we do not see it there till science, illumining our blindness, shows us that beneath the seeming immobility and isolation there exists the same constant activity without pause or break.

As science shows us that the terrestrial motions truly *are* that which the celestial motions are visibly—unceasing; so science has taught us also to see that the inorganic world is, in its perpetual activity and balanced energy, the same as organic beings are visibly to sense. Simply the organic changes move in a more contracted sphere.

Thus, in "living things" Nature gives us a key to the universal order. She makes herself small enough for us to see her; that by the less she may lead us to the greater. It is a law, gentlemen, that the more is revealed to us by the less; and the seeming greater thing ever is the greater becoming less. It is as if the vastness of the universe remembered our infirmities and bowed its grandeur to the pettiness of our perceiving that we might know it.

Aided most essentially by the light which the study of the living body has given him, the physicist has learnt to recognise, through all Nature, a perpetual series of activities of various modes. But there is one of these modes of action which is presented to us with especial emphasis in the organic world—namely, the storing up of force and its liberation. In the animal body we give to this sequence the special name of nutrition and function, because in it the object attained by the liberation of the force is one of a utility obvious to us, and directly exciting our sympathies; but the process itself is of course by no means a specially animal or organic one. Through all Nature force is perpetually being stored up and given off, and results no less marked ensue. Though often destructive, they are often also of a service perfectly visible to us. Every electric discharge, the thunderstorm, the earthquake, the very light of the sun, and the rain are instances. In every sudden exhibition of energy we see it; and Nature is full of them, mingling with other forms of action to complete the sum of her perpetual change.

But in the world we term organic we see this process—the storing up and setting free of force—as it were specialised, and imparting to it an emphatic character; the living structure is a structure containing force. It is as a bow drawn tense; as a weight suspended. As we see the developing animal body putting forth special organs which carry to the utmost pitch each its peculiar function—muscle for motion, nerves for conduction, and the rest,—so we might well deem that in the whole organic world we saw before us an "organ" of a mightier frame: an organ devoted, as to its special function, to the storing up of force to work ulterior ends.

The apparent distinctness of the organic world should be to us, if we judged consistently, a mark not of the absence but of the presence of life in the great whole of which it forms a part. For life puts forth special organs, and here is one—in the organic world. Doubtless there are more when we shall have learnt to see them.

Thus it is that the student of medicine inevitably has for his study the whole realm of nature. The tales of our ancestors tell us of a cup offered to Thor to drink. It seemed but a fair goblet, a few gallons, enough, perchance, to drown a man, such as he had often quaffed, and he took it laughingly; but for all his drinking the cup became no emptier. It was the sea he drank. And to you also, gentlemen, is offered a cup, a fair-sized cup, just the knowledge of the human frame—a fair goblet for a thirsty soul. But drain it, drink your fill, exhaust your power; you will find it full as ever: it is the ocean you are drinking.

For if we look at the living body thus—see it as an exhibition of nutrition and function, or of force stored up and an action effected by its liberation—if we recognise that this process is the same in the organic body and in the inorganic world, we can understand why the study of the bodily life has drawn within its compass not only, on the one hand, that of all inorganic force, but, on the other, that of the whole conscious life of man. For in this conscious life we do but meet with the same process under another form. And though our time affords us space but for the merest outline, I should like to make this, if I can, in some small degree clear to you, so greatly does it add to the interest of your chief study.

Suppose that on any subject we are studying we start with a false assumption, there is one way, and but one, in which we are cured. We have to take the trouble of tracing out the consequences of the false assumption, until, through the weight of their unreasonableness, we are compelled to let them go, and accept a different thought. Every *reductio ad absurdum* in our Euclid presents to us the process; there is an effort, a strain, a tension put upon the mind, and as it ceases the premiss is corrected. Force is stored up, and as it is set free a "function" comes, which is the change in our fundamental thought.

Now, take the last great generalisation of science—that which, perhaps, more than any other, will make the scientific glory of the age just past—the unity of force. Is not the process of its attainment plainly that which I have described?—a vast nutrition which had that new vision for its function. It came by a *reductio ad absurdum*. For man's senses gave him a false assumption to start with. They showed him, not the presence of one force, but the appearance of many—arbitrary, disjointed, beginning and ceasing. The electric flash passes and seems to be altogether gone; the wave dies on the shore, but the shore does not move. My mere will seems to me to move my arm, and when its motion is over there is an end.

What could men have done but what they did?—trace out (as they did with splendid exactitude and completeness) the result of examining Nature on the assumption of many separate forces. And they surrounded themselves accordingly with fictitious entities—imponderable fluids and so on—without end. What a weight of suppositions they had to bear. But it fell at last (most happily for us); and the strain and tension of the mind found relief in the thought of a simple constancy of action appearing under various forms.

We recognise familiarly the identity of the raising of a weight with the nutrition of a muscle, and of the fall of the weight with the contraction of the muscle. But is not the parallel equally obvious in this living process of the mind?—the toilsome raising of the weight of false hypothesis and its sudden fall, effecting how plain a function. A poet has seen this before. Listen to the words Shelley puts into the mouth of Prometheus:—

> "Hark the rushing snow!
> The sun-awakened avalanche, whose mass,
> Thrice-sifted by the storm, had gathered there,
> Flake after flake;—in fate-defying minds
> So thought on thought is piled, till some great truth
> Is loosened, and the nations echo round,
> Shaken to their roots, as do the mountains now."

Thus it is that our advance in knowledge comes by means of crises—by sudden changes gradually prepared for—truer apprehensions to which the very piling up of false thoughts conducts. Wherever ignorance lies at the root, knowledge comes life-wise—by nutrition and function.

And when we advance to the moral life, we see the same laws ruling there also. As we glance back over history, what is more striking than the false *laws* with which man

has bound himself—the false thoughts of right to which he has made himself a slave? When we look at His life to whom our highest life is due, what do we see but the casting aside of needless, hurtful laws, and the grand teaching of a new simplicity of right, one and the same in every changing form? And that He who so taught us gave us the true key to life Nature herself bears witness. As ignorance imposes falsity, and makes the very powers of truth work error, so by a parallel necessity does lack of true goodness in the soul compel man to lay upon himself false laws and make the very powers of good work an intenser evil. Nor arbitrarily is this done, nor wastefully; but—through the same beneficence of life that rules in his body and his mind—to work the same end also for the soul, and by the toil of the nutrition to bring the gladness of the function. False laws, that make a *tension* in the life and set the soul at variance with itself, as they *fall*, bring into the heart of man a truer and better goodness; and even the darkness of superstition is preparation for the light.

Thus we see in a fresh light why it is that the student of medicine must be the student of all knowledge; he studies life, and life is all.

But never yet was task imposed on man that did not bring its recompense; never yet did difficulty confront him, but Nature stood at hand with a secret, waiting for him to learn it—the secret of converting difficulty itself into ease. If to know life aright all things must be known, then by life also *shall* all things be known. Like an heir just come of age, the physician of the present day is distracted with the wealth of his inheritance. It is for you to enter on its full and unembarrassed use. To the whole world—of nature and of man—the human body is the key, unlocking all its treasures. The physician stands at the centre, and sees all roads diverge—all roads clear and straight to him, because he holds in his hands a map of every land. His eye is fixed upon the pattern to which all things conform; into the very substance of his thought have grown, by long and loving search, the laws which speed the progress of the human soul, and breathe into the dust of earth the breath of life.

So much is life the key to all things, and the human frame the key to life, that we may fairly say there is no department of human knowledge in which the quickening influence of the physician must not and will not be felt. The laws of physics and of chemistry are but too partially perceived till we see them, as it were completed and in their perfect cycle, in the organic body. And turning to the other direction, how vaguely are the mind and soul of man apprehended until, by aid of the revelations of organic life, a clue to their history and the significance of their processes is grasped. Seeing them thus, we enter upon them with a new understanding. We perceive that the results man first gains with so much effort are valuable, not for themselves, but for the truer good they are destined to bring, and which comes to us in their seeming loss; that we first possess our own labours truly when we have them in their fruits; our truths in fuller truths, our rights in deeper rights. Nor is the advantage one of thought alone, but eminently one of practice. Interpreted thus by life, the mental and moral experience of man would itself become more truly living, and the supple vigour of an organic process replace more fully the mechanical rigidity with which we still seek vainly to supply its want. As of the living frame, so the true excellence and the true stability of the mental and moral life of man are in its perpetual change, its fluency to nature, its unity with her.

And thus, perchance, there dawns on us a truer vision of the place which the student of medicine should rightly occupy in human life—shall in the future occupy. Holding in his hands the chief key to life, it will be from him, if he worthily fulfils his part, that all men must derive their best suggestions. Of all sciences, of all arts, his art and science must be the rallying point and centre; by its facts all theories be judged, by his successes or failures all other efforts guided.

Only when the thought of a life in them makes them luminous, shall any work of man's hand or labour of his brain be rightly transparent to his eye. Only when the task of rightly dealing with the human body, duly achieved, has marked out the path, shall man with a true success apply his energy to any other toil. Let me take one instance (and I take it by preference from our failures): the now acknowledged excess to which bloodletting was carried in former days. As lovers of the art of healing, we must look back with regret to a practice by which life was hurt instead of aided. Yet if we could learn aright its lesson, we might find that the error had been a boon to man. For why was it that physicians, fully the equals in zeal and intelligence of any that have succeeded them, persisted so long in a practice which thwarted their own end? This chiefly: that depletion did attain the ends for which it was employed—did quiet the pulse, relieve pain, and transfer the patient from a condition of intense distress and obvious danger to one of manifest relief. The success deceived: the immediate end was gained; and it seemed as if, could the means be carried out with sufficient zeal, it would secure everything. There was the visible demonstrable good: how should it not have been pursued? What our fathers too little regarded was the fact that the human body is a living thing, with infinite reactions.

Medicine has repented of its error; has carried, as some think, its repentance also to excess. At any rate it has learnt to look with more reverence upon the mysterious living thing with which it has to deal, and to understand that the direct results it can secure by its interference embrace but a small part of the problem it has to grapple with. But medicine has not learnt this lesson for itself alone. There is another living frame on which men also aspire to act the physician's part—the frame of the social organism. And is it not obvious how much our errors may teach men here? How strongly they tend to succumb to the illusions which deluded us; to take no account of the untold reactions of the living frame, and look only at the immediate results they can secure—victims, like us, of their own success; rushing to meet every evil with some mechanic remedy; as if this great life, which man's heart and soul work out for themselves, were a mere dead mechanic thing.

They do but follow in our steps, falling under the same temptations; but therefore should ours be the eyes to see for them.

Only one more remark. In the very depths of the soul we see that the laws of life prevail. Not less than the intellect, the conscience also owns them; and because the moral progress is a life, it also has bent itself, and surely will ever bend itself, to hear what the study, not only of man's bodily constitution, but of his bodily infirmities, has to tell.

The future shall be like the past. Of old, there stood before a Man, on the one hand, a law, forbidding him to labour on the sabbath, enforced with all divine authority as interpreted by the reputed wisdom and godliness of his age—this law on the one hand; and on the other, a poor lame man's sorrow. The Man before whom these two claims came—God's, as all men said, and his fellow's—chose which He would heed: and He gave us a new law. He cured the *body*; and mankind, never ungrateful, never unknowing of their friends, have called him the Physician of the *soul*.

The needs of man interpret the laws of God. And who stands so close to the needs of man as you will, gentlemen, to whom, in their very direst need, *all* will cling; to whose voice sick hearts will listen as if it were the very voice of God declaring judgment or mercy; the very skirts of whose garments—if only a heart beats beneath them—faint hands will be raised to touch. Closest to the very sources of the life of the human soul you will stand; it is the physician's place. Of the highest law he is made interpreter.

Thus in the limitless extension of the knowledge which our art demands we may see a proud meaning, a proud prophecy. In stretching out its hands on every side it does but take possession of its own dominion; it does but establish channels through which, into every department of life, even those which seem the most remote, it shall diffuse a vivifying and re-creating power.

These are dreams, doubtless. Every achievement by which man's life has been enriched was a dream once. Only the facts are greater and grander than the dreams, and contain in them the germs of still greater facts to come, which to our eye are evils, and keep us looking to a future still; so that our very discontent is proof of the wealth of our possession. A harvest is not the less rich because a larger seed-time seems to absorb it all. Every good that becomes a fact was once a dream. But no dream ever became a fact except by steps that were no dream—through patient, quiet labour, content to bring, day by day, that one day's work, asking no question but that it should be what

it pretended. By what minute and tedious dissections Hunter made into a certainty his dream of a great unity of life through all the animated world; by what painstaking and protracted experiments Jenner confirmed the dream of a protection against small-pox; by what ungrudging labour of observation and comparison did our own Bright and Addison establish the pathology of the diseases that bear their name, and give a new precision to the healing art. Such as these are the steps by which man's dreams have become his proud realities; and your steps, gentlemen,—true steps in all reality, remote though they may seem, to more than I have dared to image forth,—are, a rigid scrutiny of the bones, and patient continuance in Materia Medica.

Address

DELIVERED AT THE

ANNUAL MEETING OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION,

Held at the Royal College of Physicians, August 6th, 1873.

BY T. HARRINGTON TUKE, F.R.C.P.,
PRESIDENT OF THE ASSOCIATION.

(*Concluded from* p. 448.)

2. ONE of the most important questions that can engage the attention of the physician practising in our branch of medicine—one, indeed, of momentous consequence to the community—is the alleged increase of insanity. Is it possible that, despite our exertions, the disease, which it is the business of our lives to subdue, is gradually gaining upon us? Very opposite opinions are held upon this subject; and in some very able papers in the *Journal of Mental Science* Dr. Lockhart Robertson has exhausted all that can be said, has adduced all that can be brought forward, in advocacy of the hopeful view, that the statistical returns lead to a fallacious conclusion, and that insanity has not increased in any undue proportion. I regret to say that the elaborate annual reports of the Commissioners in Lunacy, and the inference to be drawn from them, seem to me to unanswerably demonstrate the reverse. The subject naturally attracts much public attention; it is one well worthy of our most careful consideration.

In 1861 the Commissioners in Lunacy reported that they had no reason to believe that insanity was increasing, of course admitting that the absolute number of the insane was larger. They ascribed to improved registration, wider recognition of the advantages of asylums, and to other causes, an obvious weight. I am not aware that they have since expressed any opinion, but the materials to form a judgment upon the subject are amply afforded in their valuable annual reports. In the report for 1872 the Commissioners have given the table now before you.

TABLE II.—*The Ratio per* 1000 *of the Total Number of Lunatics, Idiots, and Persons of Unsound Mind, to the Population, in each year from* 1859 *to* 1873, *both inclusive.*

YEAR.	Population.	Total Number of Lunatics, Idiots, &c., on Jan. 1st.	Ratio per 1000 to the Population.
1859	19,686,701	36,762	1·86
1860	19,902,713	38,058	1·91
1861	20,119,314	39,647	1·97
1862	20,336,467	41,129	2·02
1863	20,554,137	43,118	2·09
1864	20,772,308	44,795	2·15
1865	20,990,646	45,950	2·18
1866	21,210,020	47,648	2·24
1867	21,429,508	49,086	2·29
1868	21,649,377	51,000	2·35
1869	21,869,607	53,177	2·43
1870	22,090,163	54,713	2·47
1871	22,712,266	56,755	2·49
1872	23,074,600	58,640	2·54
1873	23,356,414	60,296	2·58

It will be seen from this return that in the ten years ending in June, 1873, there has been an absolute increase from 43,118 to 60,296; in other words, the number of the insane upon the register of the Commissioners is each year increased by nearly 2000. That there is a much greater increase than is commensurate with the growth of the population is shown by the ratio of the insane to the sane having increased from 1·86 per 1000 to 2·58.

The Commissioners, in their report, have compared the aggregate number of the insane with the entire population. In the following table, for which I am mainly indebted to the kind courtesy of Dr. Farr, our most eminent statistician, the increase of insanity is more strikingly shown by dividing the population into groups of those below twenty, those of middle life, and those of advanced age.

TABLE *showing the number of Insane in each year from* 1861 *to* 1871, *the Ratio per* 1000 *of the Population at different Ages.*

DATE.	Ratio of Insane per 1000 of Population.	Ratio per 1000 from 20 to 60.	Ratio per 1000 from 20 to 60 and upwards.
1861	1·97	4·1	3·6
1862	2·02	4·3	3·7
1863	2·09	4·4	3·8
1864	2·15	4·5	3·9
1865	2·18	4·6	4·0
1866	2·24	4·7	4·1
1867	2·29	4·8	4·2
1868	2·35	4·9	4·3
1869	2·43	5·1	4·4
1870	2·47	5·2	4·5
1871	2·49	5·3	4·6

Mental alienation being of most frequent occurrence between the ages of twenty and sixty, the exclusion of children and the aged, in figures counted by millions, will make a very great difference in the returns, but does not materially affect the rate of increase. It will be seen at once that the ratio of the insane to the sane, in the adult population up to the age of sixty, has increased during ten years from 4·1 to 5·3 per 1000: an increase of more than 20 per cent.

In the first column the ratio per 1000 of the insane is given in reference to the whole population; the second is the ratio of the insane in the age between twenty and sixty; it is to this I have specially drawn your attention.

These figures appear to prove that a great wave of insanity is slowly advancing, making in each year a definite progress; further examination, however, may show that the danger it presages is more apparent than real, but it is incumbent upon us to examine it carefully, to study well the laws by which it is formed and directed, and to take boldly against this sea of trouble all the arms of science and medicine, all the arts of prevention and cure.

Various reasons have been suggested to explain this increase, supposing it to be such, and some of these it may be useful to consider.

It has been assumed that the congregation of large bodies of workmen in towns and cities, the confinement arising from the nature of their toil, and the restriction of their space, have given us a degenerate population, subject to mental disease. But this is not altogether so; such causes would induce idiocy in children and diminish the average duration of human life, but would not necessarily induce insanity in men of mature years; moreover, it is by no means certain that the inhabitants of the crowded city are more prone to mental disorders than the inhabitants of agricultural districts.

The emigration of the adult population, which has been steadily increasing during the last half century, may also have had some influence upon these returns, but it cannot be a great one; if emigration takes to other and kindred shores some of the finest of our peasantry, the best of our workmen, it also fortunately tempts the unstable, the enthusiastic, the adventurous, the disappointed, who, perhaps, remaining here, fretful and despairing, would have swollen the number of the insane.

The hypothesis has been advanced that the progress of civilisation and the spread of education among the masses have with a greater activity of brain produced a corresponding increase of nervous exhaustion and disease. This is a melancholy theory; it would unsettle our belief in the

onward progress of mankind, it would shake the very foundation of our faith. Such a theory receives no support from statistics; if intellectual training and mental exertion were causes of insanity, then it should be more frequent in those ranks in which during the last half century the mental powers have been so much more cultivated and exercised. The statistics of lunacy show that the increase of insanity has been amongst the poorer classes only. The Commissioners in their eighth table state the percentage of poor lunatics to the total number of the poor to be 3·66 per thousand in 1859, but the large proportion of 5·98 per thousand in 1873, or nearly double in fifteen years.

This increase has been notably great during the last two years. I fear the explanation is to be found in higher wages, and the consequent means of undue indulgence. But there is another aspect to this view. It may be that the inexorable laws of supply and demand, while giving more than due wages to some of the working class, plunge others into dire distress. The knowledge of this can only add to our tender pity for the insane poor. That poverty and the absence of mental training have much to do with the production of insanity is shown by the return of the Commissioners in Lunacy for Ireland. From 1846 to 1861 there was an increase of *one-third* in the number of the insane in this part of the United Kingdom, the population by emigration and other causes having diminished during the same period by nearly three millions.

The Chief Commissioner for Scotland, in his presidential address last year, spoke well and wisely in counselling that this state of things should be met, not by "increasing our asylums," not by "waiting till insanity is produced," but by "arresting its progress and stepping in before the mischief is accomplished."

This is, perhaps, the business of the State rather than ours, but we can at least help, by showing that only "dull fools suppose" that education can be instrumental in the increase of brain disorder. On the contrary, it will prove the chief means of its prevention, if by education is understood the training that teaches the control of the passions and the emotions, the careful exercise of reasoning power, and calm trust and belief in the one sure guide, our present help in trouble.

3. In order to examine whether the treatment of the insane, apart from therapeutics and the so-called non-restraint system, can be still further improved, it is essential to consider the present methods of treatment and their results. As in a great majority of cases separation from home and its associations is unavoidable, the law recognises for their safe care and detention seven various forms of institutions; in the case of the rich, who can command treatment at home, there is no legal provision.

The following table, taken from the same valuable reports of the Commissioners as the former one, gives the numbers in each class of institutions, and the percentage of cures in them:—

TABLE *showing the Proportion of stated Recoveries to the Admissions in each Year.*

—	Number of stated Recoveries to 100 Admissions.													Averages.
	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	
County and Borough Asylums ...	34·04	30·65	35·42	39·28	36·93	37·11	33·88	35·71	36·19	36·10	35·72	36·36	33·78	38·35	35·68
Registered Hospitals	46·65	35·99	43·23	37·71	39·95	36·10	37·24	48·70	37·67	36·72	36·74	40·09	37·20	30·98	38·91
Metropolitan Licensed Houses...	32·04	30·79	28·29	29·85	32·01	30·93	23·04	23·75	21·24	24·05	24·24	21·83	26·94	20·83	26·41
Provincial Licensed Houses ...	30·33	33·56	31·70	32·32	33·07	29·52	24·49	33·95	34·11	23·62	29·88	29·26	32·55	27·15	31·39
Naval and Military Hospitals, and Royal India Asylum ...	25·22	23·13	18·16	21·12	17·94	19·66	16·94	5·26	22·33	15·28	31·82	17·98	30·37	40·56	21·83
Criminal Asylums...	...	...	...	...	1·01	3·07	7·41	13·95	9·33	4·21	18·75	52·25	22·07	17·64	12·96
Private Single Patients	15·63	4·00	5·88	13·11	9·52	3·77	9·64	12·50	6·34	8·09	10·06	8·22	10·10	11·25	9·15
Proportion per cent. of the aggregate number of Recoveries to the aggregate number of Admissions ...	35·12	31·06	34·11	36·81	35·34	34·37	31·56	34·22	33·08	33·06	33·95	34·14	33·01	34·87	33·95

Although it would be unwise to give undue weight to minor statistics, these figures involve large numbers and include many years. In the absence of any other indication, it may be as well to take them for what they are worth; even if imperfect, they are at least some measure of the success or failure of the methods in question, in relation to the great object, the cure of the insane.

First, as to the county asylums, the table shows us that during ten years the average percentage of the cured, calculated upon the admissions, was about thirty-five, and in the registered hospitals thirty-eight. As there is a higher class of patients in the latter, this is further proof, if such were needed, how surely linked together are poverty and insanity. The fact that the cures in these institutions are nearly equal speaks well for the management of the former.

I shall not enter into the details of the methods by which these large asylums may be improved; they are still in a transition state, and the boarding out of selected cases, building pavilions, and a more extended intercourse between the sexes, are all questions under consideration. Admitting that the first cost of some of these asylums has been too great, and has unduly pressed upon the ratepayer, the present expenditure is very carefully regulated, and in some institutions the result has been all that could be desired. It must, however, be remarked—and the exact figures are to be found in the Commissioners' reports—that there is a very great variance in the ratio of cures in different asylums. Why is it that the average ratio of cures in all should be only 35 per cent., while in one asylum 55 per cent. are cured, and in another the rate of cures sinks down to only twenty-eight in the hundred?

Let there be no Gheel colonies, no material change in a system that at the best is so successful. But it will be well to explain the variance referred to—to take measures to improve those asylums which fall so far behind the rest. If the ratio of cures in all public asylums were more nearly equal, the difficulty as to the increase of the insane would be removed; cures of 55 per cent., or even 45, would soon palpably diminish the number that now assumes so formidable an aspect. As to private asylums, the table before us does not give the proper means to judge the question of their usefulness; the result as given is obtained by grouping together a number of large and small asylums, some not under the charge of medical practitioners at all, others containing large numbers of the poor; no one could form a correct judgment upon such data.

More careful classification of private asylums would lead to a very different conclusion, and certainly it must be conceded that the report of the Commissioners appears to prove that the progress of insanity in the upper classes has received a material check. It should be remembered that a comparison of the results as to cure in public and private asylums, is hardly fair to the latter. To the poor the asylum is a welcome refuge; they have skilled medical attendance, kind treatment, and, in the best asylums, in a great proportion of cases, a certainty of cure. In the higher ranks of society the asylum is as much as possible avoided, and the object of the physician is to cure the patient without resorting

to this the last measure. In the present state of public opinion, the physician is frequently right; but, I confess, I have grieved to see prejudice interfering with proper treatment, and valuable time lost; and I certainly agree with Lord Shaftesbury in his emphatic declaration, given in the report of the Select Committee of the House of Commons, in 1859. His lordship says:—"From the bottom of my heart, I would advise anybody, if it should please Providence to afflict any member of his family, to send him or her to a private asylum; if my own wife or daughter were so afflicted, and I could not keep her in my own house, under my own eye, I would send her to a private asylum—a good private asylum." Lord Shaftesbury goes on to adduce the reason, *because there are some most remarkable examples of excellence and comfort among them.* This remark would seem to show that in private as in public asylums, there are many grades and differences in treatment and cure.

That the decrease in the number of the insane of the higher ranks is not due to their being sent away from home to other houses than asylums is fully shown by the returns of the Commissioners; less than one in ten of such cases the Commissioners register as recovered.

The diminution in the number of the insane of the upper classes is to be ascribed, I believe, to the improved knowledge of the disease amongst the medical profession; hence arise an earlier recognition of the malady and a quicker application of remedies. These, moreover, have recently been much increased in number, and their action, and those of the older ones, more studied and better understood.

Sanitary science, too, has achieved much; the muscular training of our youth, now so universal, has done great good; again, our country during the last decade has had a happy immunity from those disturbing influences that act as banefully upon the intellectual powers of a nation as upon individuals, and the wider spread of education has not only trained the mind to fight against imaginary evils, but to bear patiently those real and unavoidable.

It only remains for me to ask your opinions upon the subjects I have named; it is impossible, in this large meeting of the most eminent of our profession, but that something may be struck out to advance the interests we have so much at heart, and that what I may elicit from you will compensate for those deficiencies in my own address of which I am so conscious. I sincerely thank you for your kind attention, and again must express my gratitude for the honour you have done me in my election as your President.

Abstracts
OF THE
INTRODUCTORY LECTURES
DELIVERED AT THE
VARIOUS MEDICAL SCHOOLS OF LONDON
AT THE
Opening of the Session 1873-74.

CHARING-CROSS HOSPITAL.

INTRODUCTORY ADDRESS BY MR. BELLAMY.

MR. BELLAMY commenced his address by welcoming the students, remarking that those just entering upon the profession were about to commence a most delightful period of the lives, during which they were to be laying the foundation of that kind of training which was to fit them to enter the ranks of an army of men whose lives are devoted to the welfare of others rather than of themselves. They would find ample opportunities, during the time that they remained in the little world they had entered, to develop what must be regarded as a qualifying process, associated as they would be with various men, who have different tempers, habits, and manners—each of them a separate study; a study which should go hand in hand with the most engrossing one, that of their profession: embodying the saying that "The proper study of mankind is man"; and, as far as the medical practitioner is concerned, of man in his normal and abnormal conditions. No slight amount of what might be termed judicious steering would enable them to pass through this period scatheless in self-respect and in reputation; to have, on the one hand, avoided contamination, and, on the other, to have added by their own examples their quotum towards the moral tone of those with whom they had to do and of the school they entered; by endeavouring to act up to the characteristics of young Englishmen—manliness, high-mindedness, and a regard for the feelings of others.

Alluding to the Hospital Sunday movement, Mr. Bellamy said that, when in working order, it would be a great boon to the unendowed hospitals. He did not, of course, allude to certain special hospitals, the support of which appeared to be rather an effort of misguided charity, and their maintenance a hindrance to the efficacy of the general hospitals, where the first men of our time, and the acknowledged leaders of British medicine and surgery, daily treat every form of disease which can present itself, without making any one form of malady unduly prominent.

Mr. Bellamy called attention to the shameful abuse of hospital charity by those who were in receipt of incomes such as would enable them to pay for advice; he trusted that some legislation might prevent the present state of matters, and stated that he had seen men in the out-patient department whom he afterwards found out were in the receipt of three or four guineas a week thus imposing on the hospital charity.

The lecturer then proceeded to speak of the great value of early education to the medical student, and said that as it was impossible to overrate the advantages of a liberal education, so was it equally impossible to withold a natural preference for such young men as had availed themselves of it. The aim of all their scientific studies, however, was as an introduction to the great subjects, medicine and surgery; and he referred to the great difficulty there was of drawing any distinct line of demarcation between them. The surgeon, to practise sagaciously, must be thoroughly conversant with such technicalities as have been too frequently considered as the physician's province, whilst he has in addition a patient's well-being dependent upon his nerve and the steadiness of his fingers in directing the knife. The teaching of practical operative surgery has hitherto been much neglected in the student's course, and the necessity of his undergoing special training in the mechanical part of his profession, besides his mere dissections, could not be too strongly insisted upon.

Mr. Bellamy then urged upon the students the necessity of hard work in the wards; as he had advised them in the scientific course to *live* in the dissecting-room, so in their practical one he counselled them to *live* in the wards and post-mortem theatre, of course with a proper amount of recreation, upon which subject he made some remarks. Referring to the uselessness of "cram" in obtaining any insight into disease, Mr. Bellamy instanced a case he had been told of, of difficulty experienced by a "show" prize-man in medicine in recognising a simple case of measles. He then went on to explain the several branches of the profession, such as surgeons, physicians, obstetricians, and general practitioners, and observed that circumstances alone could direct them as to which branch of the healing art they should individually choose. Of the consulting physician or surgeon he said that it demanded a man's possession of a hospital appointment, and, having obtained it, that he bide his time till he got consultations. "Biding his time" implied a large outlay of what capital he possessed, real or ideal, for the sake of keeping up appearances, without expecting any return for years; and "obtaining consultations" depended either upon singular ability, connexions, or a subtle tact in powers of ingratiation. He then spoke of how the lives of the generality of those he addressed would be spent—namely, as general practitioners, and concluded by saying that "as such you will be expected to have everything at your fingers' ends, and be up to every emergency; no difficult case should daunt you. Thoroughly provisioned for your campaign through life by early culture, good examples, a thorough appreciation of the attributes of Christian gentlemen, and sound practical and workmanlike knowledge of your profession, you must leave no stone unturned lest there lie beneath it some latent energy, which is being directed against your powers of observation for detection of disease; you must fight your best and hardest, and

nerve yourselves for your future attempts to grapple with death, and to delay his certain triumph. But do not, gentlemen, consider that professional accomplishments are to be 'the be all and the end all' of your attainments during these years of training; 'make use and fair advantage of your days,' and let it be said of each of you what Valentine said of his friend, Sir Proteus,—

> 'His years but young, but his experience old,
> His head unmellowed, but his judgment ripe,
> * * * * *
> He is complete in feature and in mind,
> With all good grace, to grace a gentleman.'"
> *Two Gentlemen of Verona*, ii., 4.

ST. GEORGE'S HOSPITAL.

MR. BRUDENELL CARTER'S INTRODUCTORY ADDRESS.

MR. CARTER commenced his extempore address by saying that the utility of the introductory addresses had of late years been called in question, and by defending the ancient custom on several grounds. He then proceeded to discuss medical education in the sense of Paley's definition of education, as comprising every preparation made in our youth for the sequel of our lives. Among these preparations the storing up of knowledge occupied a high place; but the due and harmonious training of the faculties by which knowledge was to be applied was, he held, of even still greater importance. His hearers would be called upon to attempt the solution of very difficult, because very complicated problems; and it would avail them little to have filled their memories with learning, unless they had also cultivated the power of observing with accuracy, and the power of judging with discrimination. For the purposes of such cultivation they enjoyed many advantages over the students of preceding generations, especially the great advantage of being required to bring to their work minds exercised and strengthened by liberal education. They must not take it for granted, however, that this liberal education had done all for them, in the way even of preliminary training, that their minds required or could profit by; for much of the school teaching of the present day seemed to be guided by a belief that the introduction of compressed facts would mechanically expand the intellect. He deplored the wide extent of knowledge now demanded from the young at various preliminary examinations, saying that it placed an obstacle, always formidable and often insurmountable, in the way of real education, and could only be attained by a sacrifice of thoroughness, and of some of the chief objects of teaching in respect of everything that was said to be taught. These chief objects were to produce and cultivate a habit of careful attention to the meaning of words, and to accustom the mind to a high standard and to a certain kind of reasoning. Amid great laughter, he compared the show pupils of the period, who are able to write down marvellous answers to a multiplicity of questions, on a multiplicity of subjects, to the wooden cannon known among artillerymen as "quakers." These require for their production, in unlimited numbers, besides the blocks of wood, only a turning-lathe and a paint-brush; and they are placed to deceive an enemy in embrasures that would otherwise be vacant. There was, however, one grievous flaw in the analogy; for our English "competition wallahs," instead of being used to deceive an enemy, are used only to deceive ourselves. Unfortunately our notions of education are still entirely empirical; and although physiologists are entering upon researches which promise to establish a science of mental culture founded upon a study of the structure and functions of those portions of the nervous centres which were subservient to the acquirement and the application of knowledge, it would as yet be premature, even if it were possible, to speculate on the results to which these researches may lead. At present, in seeking the best attainable preliminary education for the profession of medicine, we could only use the common means ready to our hands, such as the dead and living languages,—and of all languages the English language, in which our ideas were formed, and in which, chiefly, they had to be imparted—together with mathematics, physical science, and the indirect culture to be obtained from the topics of the day, from the personal tastes, and from the floating information of the social and domestic circles. With regard to all these, the results produced should be of a far higher kind than any superficial or fleeting proficiency in the studies or pursuits themselves. The aim should be to use these studies as agencies for the development of the qualities of mind that would be most useful to the medical student, and that would best qualify him to pursue his allotted path with diligence and with success. These were, first, the power of observation, the power of searching out and recognising facts, so as to obtain materials for the operations of the judgment. Secondly, the faculty of imagination, by which to link together the known with the unknown. Thirdly, the power of maintaining a suspended judgment whenever certainty was unattainable. Fourthly, the love of truth. Under each of these heads he discussed its special bearings, showing the uses of the several faculties, the means by which they might be cultivated, and the errors which might arise from their being absent or deficient. In speaking of the imagination he observed that its scientific uses were due to the fact that the boundaries of exact knowledge, on every subject, whether human knowledge in the aggregate or that of any individual, were separated from the darkness of the unknown by an intermediate region, into which some light had penetrated. This region was the province of the imagination, or, if the phrase were preferred, of disciplined and rational conjecture. Our minds, in relation to it, might be likened to the explorers of a strange country, who were fully acquainted only with those regions that they traversed, but who had also gained such notions, of the belt separating them from the horizon, as enabled them to determine in what directions they would endeavour to make further progress. As soon as we became possessed of certain facts we called upon the imagination to account for their occurrence, and it furnished us with some suggestion upon the subject. This suggestion was a hypothesis, which might or might not be verified by further inquiry. Its proper use was to determine the direction in which we should pursue that inquiry; and we should be prepared either to adopt or to abandon the hypothesis, according to the results that the inquiry might produce. He had heard of two students, who examined the same patient in order to compete for a clinical prize. The first, who possessed great powers of observation, had his imaginative faculty for the moment dormant. He was struck by a very remarkable discoloration upon some portion of the patient's body; and, accepting the presence of this discoloration as an ultimate fact, he carefully described it in his account of the case. He made a drawing of its very irregular outline, and took careful measurements of its principal dimensions. The second student, when he came to the bedside, also saw the discoloration, but he was more imaginative than his predecessor, and his imagination led him to frame the hypothesis that the phenomenon was due to the presence of dirt! He tested the accuracy of this hypothesis by means of a sponge and warm water, and established it by washing the stain away. The incident, although trivial, was not the less instructive, and might well serve to teach the attitude of mind in which we should approach the investigation of disease. With regard to the love of truth, he warned his hearers that truthfulness was not something easy and natural, but that, in fact and in its widest sense, it was one of the last attainments of the disciplined and cultivated intellect. He said that children and the uneducated could no more adhere strictly to truth than ordinary persons could walk upon a tight rope; and pointed out, even among the educated, the common preponderance of a desire to know what was said over a desire to know what was true. But nothing short of a desire to know what was true could furnish an adequate motive for the careful investigation of disease, or could overcome the temptation of floating easily along the current of the fashionable doctrine of the day. He then proceeded to consider the relation of the special departments of practice to the work of the hospital as a whole, telling his hearers that a man who practised any single branch of the profession, without a sound knowledge of the whole, was not a specialist but a charlatan; and that, whatever might be their future aims, they would best qualify themselves for success by becoming general practitioners in the most comprehensive sense, and by leaving differentiation to be accomplished in th future. There was, however, one branch of special

study that demanded their closest attention, and that was the study of the varieties of human temperament and character, so that they might learn to use the mind of each patient as an instrument for promoting the recovery of his body. The Apostle said of his own word, "Even as I please all men in all things, not seeking mine own profit, but the profit of many that they may be saved;" and medical men must be actuated by the same spirit if they would heal the infirmities of their brethren. In the conclusion of his oration the speaker dwelt in terms of pride upon the high character of the profession, and calling to mind the words of Mr. Prescott Hewett on some former occasion—"It is not enough for a doctor to be honest; he must be chivalrous"—he urged the duty of the medical man to place the gifts with which God had endowed him at the service of suffering humanity. Estimated on a money basis, it was said the profession was "hardly worth following."

"So think the vulgar. Life and time
Ring all their joys in one dull chime—
Of luxury and ease."

For his own part, he believed that there was no enjoyment superior to the systematic and harmonious exercise of the faculties of the mind, no satisfaction greater than was afforded by the fulfilment of duty, and no lives happier than those of the great majority of the profession. If he were asked to define the sources of their happiness, he would call to his aid Charles Dickens, who had placed his story of "Bleak House" in the mouth of a heroine who became a doctor's wife, and who thus concludes her narrative:—"We are not rich in the bank, but we have always prospered, and we have quite enough. I never walk out with my husband but I hear the people bless him. I never go into a house of any degree but I hear his praises, or see them in grateful eyes. I never lie down at night but I know that in the course of that day he has alleviated pain and soothed some fellow-creature in the time of need. I know that from the beds of those who were past recovery thanks have often, often gone up in the last hour for his patient ministration. Is not this to be rich?"

The address, which occupied an hour and a quarter in delivery, was listened to with the closest attention, and the speaker's "points" were marked by loud applause.

KING'S COLLEGE.

INTRODUCTORY LECTURE BY DR. EDGAR SHEPPARD.

PROF. SHEPPARD began by welcoming the students to a College which had furnished many of the metropolitan schools of medicine with able teachers, and would, he doubted not, continue the same career of usefulness and distinction. So many remarkable addresses on the state of the allied sciences relating to their profession had recently been delivered within those walls by distinguished brain-workers at the meeting of the British Medical Association, that he was exonerated from the task of repetition. He should rather put before them what he ventured to term the socio-political aspect of their new life-calling, which took them into the drawing-room and the bedroom, and brought them into contact with my lord's prejudices and my lady's narrow and conventional thinkings. They must not only study medicine, but society in its varied character and phases. Many able men failed (to wit, Dr. Lydgate in "Middlemarch") because they could not temper their book-learning with a little worldly wisdom and a slight concession to conventional forms and prejudices. This was truly an age for making concessions; and a playful and polished way of making them would often remove a veritable stumbling-block in the way of progress which rigid philosophy would find it hard to displace. Having illustrated this subject the lecturer proceeded to say that he thought some of the treatises which issued from the medical press were of a character to make the profession common and unclean. Treatises on "Domestic Medicine," "Advice to Mothers," and such like, might be pregnant with worldly wisdom; but they did not bring forth fruit worthy of cultivation, or such as they would like to see growing upon their ideal tree of knowledge. It was this sort of thing, he feared, which had led to a recent experience which had no parallel, and had forced into opposition the liberal and time-honoured university of a northern capital. Heretofore it had been considered right to eliminate, during the educational processes to which all of us were subjected, everything that savoured of the masculine and ungentle from the sex to which they had not the privilege to belong, and everything which was effeminate to the sex to which, in a garden not unknown to fame, had been given the lordly pre-eminence. But matters were undergoing a change. By fingers more delicate than theirs and his were now handled the test-tube and the scalpel. They who once thought it their highest privilege to "mind the house and bear children" had given themselves up to "quantitative analysis" and "minute cellular anatomy." For them the teachings of Fresenius and Virchow were superseding the injunctions of St. Peter and St. Paul. It seemed to him that women were utterly mistaking their mission, and the "rights" they so much talked about would result in an angry Nemesis of "wrongs." Anyhow, he ventured to protest in that College against

"Prudes for proctors, dowagers for deans,
And sweet girl-graduates in their golden hair."

Having then made allusion to the importance of contemplating woman in a different aspect, and of securing her good opinion, since so much of the success of a medical man depended upon it, Dr. Sheppard spoke of the modern doctrine of evolution, which places beyond a doubt the fact that "our mental and bodily structure is the direct outcome of preceding generations, and that we, the existing generation, are like the living fringe of the coral reef resting on an extinct basis afforded by our forefathers, and shall in our own turn form a basis for our descendants." This was as much a socio-political as a physiological question, and therefore he put it before them. It had immense practical issues, and merited from them the most careful study and consideration. "The morality of clean blood" (to adopt a happy expression of Professor Tyndall's) could not possibly be overlooked without involving the most serious consequences. They must be careful therefore both to preach and practise the doctrine by marrying healthy wives, and so ensuring healthy children. He was in a position where he saw the evil fruit of evil sowing staring him in the face daily, and he did not hesitate to say that the responsibility of those who knowingly, and in defiance of well-established laws, transmitted to posterity the recognised abnormalities which constituted disease was absolutely enormous. From these and analogous points of view, it was obvious that the chief object of their profession in these days was rather to prevent than to cure disease. And it was beyond a doubt that the maladies which scourged the race *were* more preventable, while it was by no means equally clear that they were more curable. If the young and hungry Æsculapius thought that bad times were in store for him, and that there would be no field for his vocation, he had but to look at the growing success and importance of the profession to which the First Minister of the Crown had recently borne such splendid testimony. Allusion was then made to the valuable help which they derive in the exercise of their calling from the trained and gentle Nightingales of the sick room; to ventilation, warmth, rest, and the Turkish bath, as being more effective weapons against disease and death than (with few specific exceptions) could be drawn from the huge armoury of the pharmacopœia. Of the few drugs which were in use, it was curious to note how a kind of fashion extended to their administration. A few years ago the rage was for what is called vegetable calomel—the resinous extract of a North American plant, Podophyllum peltatum. There was a little epigram floating about the town on its virtues. Alluding to our patients, it ran—

"If you want to gripe and kill 'em, give peltatum podophyllum;
If to cure resultant colic, give them something alcoholic."

The now fashionable drug was chloral, to whose great advantages over opium in the treatment of insanity he was in a position to testify. But it was a dangerous remedy, and should not be resorted to without legitimate sanction. Ladies kept it in their medicine chests, and coroners had been under the painful necessity of sitting upon it. This fashion extended also to larger procedures, and to systems, and might yet have a scientific basis. He remembered the time when nearly every disease was treated by venesection. But a great physician, whose name and memory were revered in that College, taught us to *renew* life, and not to weaken it. Dr. Todd stopcocked the life-blood of the whole nation by throwing down the lancet and taking up alcohol. Alcohol became the fashion; it was pushed to an extreme, and

ran its little day. We had now sobered into the healthy mean.

In conclusion, Dr. Sheppard urged the students to embrace the advantages offered by King's College, and promised them every help from the professorial staff. He begged them to let their work be steady, and free from those spasmodic impulses which were not healthy in men, though said to be characteristic and unavoidable in the sex endowed with periodicity of function. They would then have a brilliant career within those walls, and a distinguished and useful career in the great world which was beyond them. Travel was essential to those who could afford it at the close of their collegiate career, and before they buckled on the professional harness; it did so much for a man which nothing else could do, and was always appreciated.

The lecturer concluded thus:—"This, then, having been accomplished, the real work begins—the practical application of all that you have taken so many years to acquire. But the wise, the earnest, the intelligent, will not cease to acquire; they will ever consider themselves to be in a state of pupilage. In a busy and active professional life they will, day by day, garner fresh treasures into their storehouse. 'The more knowledge we get,' said a Bishop Jackson of an earlier time, 'the greater capacity we leave unsatisfied.' There is one matter which in the last place I submit to you, for though to me it has always been specially noticeable, I am not aware that I have ever heard it alluded to or illustrated. It is this. The difficulties of a start in the medical profession are much greater than in that of law or divinity, and this by reason of its complex and inexact nature, as also by the issues which it involves. 'It seems to me,' says a quaint Dutch writer, 'that the first fire of an Æsculapius must be of a deadly nature, when his later and calmer zeal may still prove so dangerous.' 'Aye, there's the rub'—that first fire. A young lawyer may make his first will without much anxiety or doubt; a young clergyman preaches his first sermon, and though of course he may be very nervous, he can't do much harm, and he may do some good. At all events he will excite sympathy. He did his best, he meant well, and such like. But there will be no sympathy for you if you poke out a man's eye, even after the most approved fashion, and with the best possible intentions. Even the best educated and most skilful of young practitioners must feel the tremendous responsibility of (say) his first case of typhoid fever, in an influential household; or (say) his first case of strangulated hernia at the hospital, to which, after much rivalry and contention, he has just been elected; or (say) his first unnatural presentation in midwifery, among the croaking gossips who swarm round their sisters in the agonies of abnormal parturition. There is always some one to think and say you have done wrong in a fatal case; and even those who think you have done right may be reluctant to say so. And more than this; our doubts and difficulties extend in some measure over our whole subsequent career. There are few men—I doubt if there can be any man—even of large judgment and experience, to whom the occasion must not arise for self-scrutiny and examination, as to whether their conduct of such and such a case has been all that it ought to have been. Life is so mysterious a thing, and its attendant circumstances and surroundings are so varied, that even when we are acting on the most approved scientific principles (known to be so mutable) we may well doubt whether we are as successful as we ought to be in the art of prolonging it. 'I think there are only two things,' said Coleridge, 'which can justify a surgeon in performing the Cæsarean operation: first, that he should possess infallible knowledge of his art; and, secondly, that he should be infallibly certain that he himself is infallible.' What wisdom in the satire! Which of us is infallible? Which of us ever will be? No one, as I take it, until shall have come to him that 'inevitable' which it is our daily mission to postpone. No one, until he shall have 'gotten the key of all mysteries which never is let down into the world, and begun the real life which errs and stumbles never more.'"

LONDON HOSPITAL.

INTRODUCTORY ADDRESS BY DR. PROSSER JAMES.

THE lecturer took for his subject the improvements in the medical art which had been effected in his own time, and especially such as were connected with the London Hospital and its medical college. He showed that important advances had been made—1st, in the medical sciences—chemistry, anatomy, physiology, and pathology; 2nd, in the practical art of healing. In chemistry he showed that as soon as the spectrum analysis became practically available, its relations to chemistry, pathology, and medical jurisprudence were publicly taught in the college. In anatomy and physiology the lecturer referred to the heart. The openings through which the blood flows into and out of the cavities of the heart differ in size and shape. Why? The fact had been known from early times. The explanation was reserved for Dr. Herbert Davies, senior physician to the hospital, who proved that the several sizes and shapes are those best adapted to bring about the required result in the most perfect manner, and to furnish the formula which may henceforth be termed Davies's law; and this law stops not within the domain of physiology, but gives us a further insight into pathology, for his explanation of the condition of the parts in health enables us to comprehend the effects of changes that are observed in disease. He observed that one of the great questions of pathology at this time related to recent investigations into the connexion of Bright's disease with certain definite changes in the vascular system. In explanation of the facts observed, a theory had lately been proposed by one of the staff, Dr. H. G. Sutton, in conjunction with Sir Wm. Gull. It was true that their theory had been warmly contested, and may be said to be still on its trial; but whether ultimately accepted or not, a mass of facts had been accumulated which must prove serviceable to other searchers after truth. The recent discoveries respecting parasites were described, and allusion was made to tuberculosis and to Dr. Andrew Clark, a London Hospital physician, whose researches in phthisis had conferred upon him the highest distinction. Here the lecturer made an announcement of the first importance. It is well enough known that consumption may be arrested, but it has hitherto been laid down that one form of it, laryngeal phthisis, is rapidly and necessarily fatal. Now in such cases he had witnessed the arrest of the disease. In one instance the lungs, as well as the larynx, were affected; nevertheless, the patient recovered and resumed employment as a public singer.

Clinical thermometry was often said to have originated with Traube, but twenty years before—namely, in the cholera epidemic at Newcastle-on-Tyne in 1831, a London Hospital physician, Dr. Cobb, had employed the thermometer to measure the tendency to death, and he was assisted by Dr. Little and others. The sphygmograph was not to supersede the physician's fingers, but it enabled him to measure some characteristics of the pulse. Thus the arterial tension which we used to estimate by the hardness or softness of the pulse is now measured by the sphygmograph. So, also, is the resistance. The next instrument mentioned was the ophthalmoscope, discovered in his time. Though new, and its invention generally attributed to Helmholtz, who was the first to see in the living eye the optic nerve and the vessels emerging from it, the discovery had been foreshadowed by Mr. Cumming, who first proved that the fundus of the eye could be made visible so far as to show its colour. Another new instrument for extending the range of vision was the laryngoscope. This instrument enabled us to see distinctly the interior of the living larynx, therefore the diseases of that organ. In diagnosis it changed conjecture into certainty. It was, moreover, available as a guide to treatment. By its aid we could watch the course of disease, we could apply local remedies, we could introduce various instruments into the larynx, and manipulate them when there. Nor is the use of the instrument confined to diseases of the larynx. It affords information respecting general diseases, such as consumption, aneurism of the aorta, and other intra-thoracic tumours.

Coming at length to the practical application of our knowledge in the treatment of disease, the lecturer maintained that progress had been also made in materia medica and therapeutics, and mentioned a number of illustrations. He then congratulated the students on their choice of a profession and of their Alma Mater, and exhorted them to follow the example of those who devoted their lives to the art of healing.

ST. MARY'S HOSPITAL.

DR. SHEPHERD'S INTRODUCTORY ADDRESS.

REFERRING to the success of the students during the past year, Dr. Shepherd took for his particular subject of discussion the relation of the medical man to society. In opposition to the maxim laid down by Addison in the *Spectator*, that when a nation abounds in physicians it grows thin of people, he insisted that the opposite ought to be the fact. "The type of our mind ought to react on the mind of the people; we ought to be the scientific instructors of the people. We are very much to blame if both in its physical and moral aspects the nation is not bettered by the existence in it of a well-educated body of medical men. And the worth and force of our teaching will depend on the degree in which we take to heart the importance of this relation to the outside world." He showed what had been done by medical men for the prevention of diseases, especially epidemic ones, by teaching people to recognise and avoid the causes of them. He held that, as careful observation and patient experiment can alone give us sure ground on which to tread—sure reasons on which to base a wider science,—doctors ought to be the best opponents of a mere belief in authority. He enlarged on the necessity of a wide general knowledge for the due and right understanding of any particular subject. In summing up these and other relations, he thought that the real spirit—the "geist"—of medicine was not, as Mephistopheles describes it, easy to seize upon; and that the highest duty of medical men is to be, in more senses than Homer wrote it, "men worth many others." Referring to the education of women for the medical profession, he urged that the experiment should be fairly tried; that the question was a social one, to be settled by the result of experience and the public good. He spoke of the common aversion to the hypothesis of evolution, which he believed to be due to a horror that nature is aggrandised at the expense of man. In conclusion, he insisted on the necessity among the students of some enthusiasm for their work, and encouraged them to a full development of their faculties and a consciousness of their responsibility, as the only means by which they could secure success as general practitioners, who ought to be the typical representatives of the art of medicine.

MIDDLESEX HOSPITAL.

INTRODUCTORY ADDRESS BY MR. HENRY MORRIS.

MR. MORRIS, after a few words of welcome to the students and an allusion to the nature of the studies they were about to engage in, referred to the indifference shown by the State to the duties and functions of the medical man. State medicine or public health, though one of the very cornerstones of the social safety of mankind, was far from taking that position which even any tyro in political science would give it, modelling out a perfect political society. When hundreds, nay, thousands of our fellow-countrymen were annually destroyed by preventable diseases, no one could deny that the want of a properly adjusted system of sanitary medicine was one of the greatest imperfections of our political community. Instead of working invisibly but efficiently, as an agency of prevention should work, we had lately seen it "humbly petitioning" a Minister of State that it might be administered by competent authorities, and now we saw it groaning under an Act of Parliament which had excited surprise, dissatisfaction, and indignation. The medical officers of district schools and the medical health officers were subject to the opinions of lay inspectors unacquainted with the cardinal principles of sanitary science. In an African settlement, where the drainage and water-supply were recklessly neglected, and where small-pox and fever were rampant, not only was the sanitary inspector not a medical man, but the administrator was a military man, who first erected an arrangement for accumulating stinking refuse of all kinds under the nostrils of the residents, and then complained that he found doctors the very bane of his existence. The kind of education best suited for those destined to recruit the ranks of medicine was next discussed. All candidates for a profession opening up social or intellectual distinction should be made to pass through a course of study and a test which was general without being diffuse, and accurate without being special. Having outlined the preparation requisite, the three different methods of observation were described and illustrated, as well as the fallacies of each method.

Addressing himself to those who would shortly be leaving the hospital for the responsibilities of medical practice, the lecturer said he urged them to raise the intellectual and sink the emotional side of their nature as much as possible. He did not mean that they were not to exercise sympathy and charity—two great weapons in the armoury of medicine. Sympathy was the idea of pain in others irrespective of pleasure or pain in ourselves, and it involved both the intellect and the will; while true charity was the intellectual recognition of the misery and want of others, combined with the exercise of the will for their removal. Nor must they allow their work either to harden their sensibilities, or lead them into infidelity, as it was falsely stated by some to surely do. There was much in literature, in art, and in other sciences besides medicine worthy of their attention. In these were to be found the pleasures and embellishments of refined life; but while employing their faculties in the acquisition of various kinds of knowledge, they should remember that knowledge is but a mass of unprofitable material unless fitted to its place by wisdom: therefore let them seek wisdom. It would teach them not to fashion their knowledge into an ornament or a means to fortune only, but "into a rich storehouse for the glory of the Creator and the relief of man's estate.

ST. THOMAS'S HOSPITAL.

INTRODUCTORY LECTURE BY DR. JOHN HARLEY.

IN his introductory remarks on the choice of a profession and the objects of the medical life, the lecturer observed that entrance to the medical profession at once relieved its followers of the temptations and chagrins which attend the pursuit of wealth. Titles, too, ill become the man whose deep knowledge of life teaches him to put no high estimate on artificial distinctions. An order of merit to distinguish its possessor from the less industrious and less skilled of his *confrères* is a different thing. Such an order, though so tardily bestowed, would be a graceful compliment to a profession which has long served the State for a remuneration altogether inadequate to the charges imposed upon it; a profession which, at risks as great as those to which the soldier is exposed on the battle-field, is laboriously and successfully engaged in freeing suffering humanity from the bonds of disease; a profession whose members, occupying as they do the foremost place in the pursuit of science, have done more for the advancement and enlightenment of the world than those of any other.

In reference to his curriculum the lecturer stated:—"It is becoming every year more apparent that the majority of the young men of the present day are not, as far as a practical knowledge of medicine and surgery is concerned, so well educated as were those who entered the profession twenty years ago. In theoretical knowledge the former no doubt surpass the latter, but while men are now reluctantly pushed to know what, in the Quadrumana, is the homologue of the elephant's tusk, to state the composition of Wavellite, or to describe the manufacture of steel, it seems to have been forgotten that ours is a practical profession, and that a patient prefers the surgeon who can apply his bandage comfortably and effectually to one who beguiles his awkardness by a botanical dissertation on Gossypium, or a reference to the nature of Pyroxylin; and that 'testy sick men, when their deaths be near, no news but health from their physicians know.' The cause of this decline of practical knowledge is sufficiently obvious: a great means of practical education, the apprenticeship system, has been swept away, and its place left almost empty. The greater number of our recruits now come to our medical schools fresh from school or college, and without a single standpoint to aid them in appreciating the work to which they are thus suddenly introduced. After passing the first examination, two years alone remain for study of medicine and surgery. In our large hospitals it is of course open to a diligent student to spend the whole of the two years as clinical clerk or dresser, but to do this is an exceptional event, and time

and inclination allow the majority of such men to spend only a year in holding these appointments (and six months is all that the examining bodies require), the rest of the time being occupied with a general and very desultory observation of the hospital practice. Another defect in our present system is, that the first impression of the mode of dealing with our patients is derived from hospital practice. It will be disparaging neither to the staff of a medical institution nor to its patients to say that it would be unsuitable to carry the necessarily curt and official ways of hospital work into private practice. Yet it is hard for a man to do otherwise when he is influenced only by first impressions. The apprenticeship system obviated the imperfections I have indicated very completely. Drudge as the apprentice often may have been, a practical knowledge of minor surgery and the common diseases was forced upon him. He learnt drugs, their medicinal uses, actions, and, to some extent, their chemical characters as a matter of routine. He came in for a fair share of visiting and midwifery practice. Upon emergency he was called upon to diagnose and treat a fracture or dislocation, and as often as a capital operation occurred in his master's practice his assistance was required, and, being thus directly associated with a case, he took a daily interest in it, and learned both the treatment and its results. Thus, from year to year he was gradually introduced to the kind of practice which he intended to follow, and he came up to the medical school of his choice well grounded in professional work, and ready and able to appreciate and make the best use of the advantages offered him. No doubt the apprenticeship system, like others of our old institutions, had become custom-logged, and in some things unsuited to the requirements of the present age, but no one can say that it was incapable of being remodeled. Instead of doing this our medical legislators have thoughtlessly, and, in my opinion, most unwisely, swept it away. To me it is an astounding fact that the vast teaching resources of the private surgeries of this country should have been thus practically ignored—resources which if properly directed and employed would confer a greater benefit on the profession and the public than the united efforts of all our medical schools could possibly achieve. Something more than three months' practical pharmacy—which is practically a farce—and six months' clinical work must be given now, in lieu of the old apprenticeship system. I would propose the adoption of a modified apprenticeship, and the addition by-and-by of home-patient departments to our hospitals. By the former of these arrangements the medical disciple would be articled at the age of sixteen to a medical practitioner, for a term of three years, during which, or before commencing his studies at a medical school, he would be required to pass two preliminary examinations, the one in arts at the end of the first year of his articles; the other in chemistry, botany, and materia medica at the end of the third year; when, having eliminated these subjects from his curriculum, he would devote himself exclusively to the study of anatomy, physiology, medicine, surgery, and midwifery during another period of three years. By the second arrangement that portion of the city within a given radius of the hospital would be divided into districts, and each placed in charge of a member of the medical staff appointed for the purpose. Patients too ill to visit the hospital, and precluded either by the nature of their illness or by various contingencies from admission into the wards, would be visited at their homes by students during the sixth and last year of their study, under the direction of the proper officers. By the adoption of one or other of these plans a more perfect education of the student would be effected, while the employment of the latter would confer a great boon on a number of poor sufferers, and make the administration of our hospitals more complete."

In reference to lectures, Dr. Harley remarked:—"Both your studies and examinations are becoming every year more practical, and we may look forward to the not very distant time when the lecturer shall have become the more useful demonstrator, and the student shall be referred to his handbook for theoretical views and systematic arrangements, the motto of both teacher and pupil being 'Facta præstantiona verbis.' The student is provided with admirable text-books on every subject of his study, and as they are usually the well-digested compilations of the lecturer himself, his lectures are at best but a repetition of the printed pages which he puts into the hands of his pupils. Oratory no doubt produces a more powerful effect than the most vigorous writing, but eloquence herself is tongue-tied when dry bones and a tanglement of nerves, bloodvessels, and muscles are the only theme. Something may be said in favour of lectures on medicine, because fevers, ague, and madness cannot be isolated like a cancerous tumour or a broken bone, and put before the student; but chemical experiment and botanical facts are so completely within the reach of individual observation that lectures on these sciences may be made entirely subsidiary to demonstration. The same is in a measure true of physiology; now that we have a practical course a very few lectures would suffice. And here I must ask you to look not to the laboratory only for practical physiology, but to the wards and prescribing-room also. There you will find hosts of wonderful experiments done by Nature herself, and demonstrating truths which can never be determined by artificial imitations. And do not forget that the practical physiology I speak of, and the experimental physiology which appears to be so attractive just now, are very different things, for the one is natural and the other artificial."

Turning to the means of preventing and curing disease, the lecturer observed: "We can speak of great triumphs. Slow to learn that it is not good to keep our filth about us and sip it in the dog days, we can now point to plague, cholera, enteric fever, ague—the loathsome brood of a filthy soil,—and say the march of these is within our control. But even here there is much to learn. In dealing with the question of infection, you have need to be most wary, or else your perception will be dimmed by dogmas worthy of the darkest days of ignorance, and your observation misled by the hasty and insufficient conclusions of the day. The prevention of disease is an exciting topic for a humane and virtuous mind. The transmission of disease is no less interesting. It is a question of immense importance whether disease arising from a single source can be propagated indefinitely in successive generations of otherwise healthy individuals. It will doubtless be found that as there is in animals and plants a constant tendency to throw off superadded qualities, so will a given disease wear itself out and disappear in the course of a few generations, provided the victim's heirs strive to attain a healthy standard, and avoid similar contamination. Nature is careful of her progeny, and, granting her pure associations, she will, I believe, prove it by ridding her children, in the course of three or four generations, of the monstrous parasites that disfigure and debase them. To recognise the successive progeny of disease to the fourth generation, and refer them to their originals, will be noble work for some of you. What if cruel cancer should be found a distant remove of syphilis? One form of this disease is, we are almost sure, an exuberant variety of the primary disease. Should we not lop off the primary disease from outraged society, and prevent the anguish and destruction of an innocent posterity? Verily, I believe if medicine could work out her beneficent will, she would lead us a great way along the road to Paradise. In our present state of knowledge, we know not how much disease would remain if the preventable ones were actually prevented, and their effects allowed to die out by healthy association. But we do know that, apart from the self-polluting influences of man and animals, a condition of perfect health—i. e., a perfectly balanced and constantly uniform state of the body—can never exist so long as the external conditions upon which life is dependent continue in a perpetual state of variation. The body must share these mutations; the balance is disturbed as often as it does so; the health fluctuates accordingly, the transition periods from change to change being coincident with periods of incipient, but scarcely perceptible, morbid action. Those are the healthiest who can most readily adapt themselves to these changes; and if the more weakly could always use vigilance, and the care that prudence dictates, many of the diseases over which we have no other control would be prevented. But there is a limit to human foresight and self-denial, and so, in spite of all our prophylactics, we shall never want an enemy to cope with:—

> 'Rough winds do shake the darling buds of May,
> And summer's lease hath all too short a date:
> Sometimes too hot the eye of heaven shines,
> And often is his gold complexion dimmed;
> And every fair from fair something declines
> By chance or Nature's changing course untrimmed.'"

Referring to therapeutics, the lecturer spoke of the difficulty which attended the study of the action of medicines—a difficulty which often led inconsiderate men either to ignore the value of drugs altogether, or to adopt some one remedy and ride it roughshod over every disease. While deprecating in strong terms the abuse of alcohol and narcotics, he observed in reference to chloral hydrate, that "the theory of its action is so simple as to be intelligible to all, and in a brief space of time the drug was known in almost every family invaded by disease. Medical men prescribed it freely and indiscriminately, and not unseldom continuously. Patients thus accustomed to the use of the remedy supplied themselves, and even their friends, with it. When they would be oblivious they took chloral hydrate, and sometimes they passed from oblivion to death. Medicine has thus been made again and again to reverse her intent. Laxity in prescribing narcotics, and continuing them for slight ailments until the too willing patient is wrecked in mind and body, is a terrible indiscretion. At this moment there are hundreds of patients waiting the arrival of their medical attendant to inject another grain or two of morphia beneath the skin. Only four hours ago they had a similar dose; four hours hence they will have another. They declare they cannot endure a rheumatic neuralgia or obscure hysterical pain, and they implore you to give them frequent and increasing doses of morphia, each of which carries them still further from real help, and eventually adds to their misery and degradation. Beware of this abuse of opium, or you will bitterly repent the recklessness which first led you into it, or the want of courage which prevented you from withholding it from them before it was too late to do so. The hypodermic syringe is a powerful and most valuable weapon, but those who use it should possess more wisdom than knowledge."

Alluding to the mode of study, Dr. Harley said: "There are two acquirements which are not thought of as necessary to a medical man, but which are of the utmost use to him. They are sketching and short-hand writing. From the first to the last day of your professional career—work as hard as you will—you will find yourself a laggard on the heels of time. As a reporter attendant upon Nature, you want the means of instantaneously photographing and recording your cases. He who can delineate Nature with a few touches of the pencil and describe her moods by rapid and intelligible signs will want only one more faculty in order to know her, and that faculty is observation. Learn to apprehend facts—simple facts, and fix them in your mind. Life, disease, and death are the facts you have to deal with, and these are not simple, like those which engage the attention of the astronomer or the chemist, but complex. Each of these phenomena is a mosaic of facts, so perfectly fitted as to show no lines on the surface, and scarce a clue beneath. Your first object must be to discover and isolate these facts in your observation of the broken vessels which come before you, to identify their connexions, trace their relations, and, ultimately, to do your tiny share in putting the wonderful puzzle together that makes 'this soft, sensible motion.' This is, indeed, the laborious work of ages. Do not be discouraged that the labour seems so little fruitful. Each one of us can do no more, perhaps, than recognise and isolate one bare unconnected fact. But, like the fragment that is turned out of the dust-heap which marks the site of the ruined and forgotten city, your fact will some time in the distant future be recognised as the link wanted to complete a discovery which may result in untold benefits to the human race. 'Benefits to the human race'—never forget that that is the object of all your study now, of all the efforts of your maturer understanding and skill hereafter. Faithfully pursue that divine object, and thus shall you be daily laying up for yourselves treasures in Heaven, where neither moth nor rust doth corrupt, and where thieves do not break through nor steal."

UNIVERSITY COLLEGE.

MR. ERICHSEN'S INTRODUCTORY ADDRESS.

MR. ERICHSEN—who, we were pleased to notice, diverted from the usual custom by discarding the use of a manuscript—began his address by saying that in no department of science has the intellectual activity of the present age wrought a greater change in a comparatively brief space of time than in medicine. He would, however, confine himself to the consideration of the progress of the art and science of that department of medicine in the study and practice of which his life had been spent, and in the teaching of which he had been engaged for nearly a quarter of a century.

There are two great schools of surgery in this country, the practical and the scientific; and to one or the other of these every surgeon will more or less distinctly incline. It is well, therefore, to examine the more distinctive characters of each of these schools, and to trace their more recent advances and endeavour to penetrate into their more immediate future. Firstly, then, to take the practical school, which is resplendent with many great and illustrious names, and which is, and ever has been, most popular in this country and most in accordance with the practical genius of the British people and their inborn and intuitive aptitude for mechanical pursuits and manipulative action. In considering the progress of surgery as a practical art, and determining the causes that have led to the great development of its mechanical and manipulative departments, it is not unprofitable to look back upon the surgery of forty years ago, and to give some attention to the influences which have led to its progress towards perfection.

A generation back the anatomical school of surgery had reached its acme of development. The study of practical anatomy had been prosecuted with zeal by a chosen few who had successfully struggled against the popular prejudices brought to bear against it. These practical anatomists necessarily became the operating surgeons of the day. By them surgical anatomy was assiduously studied, and those operations which had for their basis a thorough knowledge of the relations and structure of different portions of the human frame, such as the ligation of arteries, herniotomy, and lithotomy, were often practised, and skilfully done. But although many operations were admirably and skilfully performed by some of the distinguished surgeons of that period, it is certain that a large proportion were done timidly, slowly, and often in a slovenly manner, without definite or precise rule. In fact, thirty-five years ago, surgery as a manipulative art had fallen into a sluggish and an inactive state. No advance had been made in the two greatest operations in surgery, that for stone in the bladder and for aneurism, since Cheselden, nearly a century before, had introduced his operation, or since Hunter had made his name immortal by his operation for the cure of aneurism. But while surgery was slumbering in the south, it had been gradually acquiring an extreme degree of activity in the north, where it had rapidly become perfected as an art by the skill, the energy, the teaching and example of a band of distinguished men, nearly contemporaneous, who gave lustre to the great school of surgery which at that time flourished in the northern metropolis. To Lizars and to Liston, to Syme and to Fergusson, British operative surgery is deeply indebted for much that is its peculiar glory and its chief characteristics, which are boldness in conception, and rapidity, precision, and simplicity in the performance of operations. These surgeons used few and uncomplicated instruments, and they taught that the knife might be wielded in surgery, by a practised hand, with the same skill and the same certainty that the master of a craft evinces in the handling of any instrument that is employed in his calling. In all respects Robert Liston was the foremost member of that distinguished band. His influence was soon felt after his arrival in London, and his example is often unconsciously followed in many an operating theatre of the present day. Cut off in the fulness of his matured experience and of his professional activity by a disease almost as sudden as it was premature, Liston died too early for the full accomplishment of his fame, but not too soon for the fruition of his example.

Preceding the death of Liston by a few months, there occurred an innovation which has tended more than anything else to extend the sphere of modern manipulative surgery. The introduction of anæsthetics has induced the patient to submit more readily to surgical operations of all kinds, and to subject himself to what would otherwise have been beyond the limits of human endurance. It has also tended to popularise operative surgery by inducing many practitioners to become operators who would otherwise have shrunk from the necessity of the daily infliction of pain as a part of their professional duty.

During the ten years which immediately preceded the introduction of anæsthetics, surgery partook of the great advance that characterised all the natural sciences, and the zeal with which it had been studied led to the establishment of various distinct departments within the precincts of the art itself, in each of which the treatment of numerous surgical affections by mechanical and operative means was diligently and extensively carried out. The gain that has resulted from this advance can never be lost, but is permanently secured to surgery and to humanity. There is no retrogression in surgery, and what our predecessors have done we can readily accomplish, and our successors will not fail in what we can do. But there must be a final limit to the development of manipulative surgery. The knife cannot always have fresh fields for conquest; and although methods of practice may be modified and varied, and even improved to some extent, it must be within a certain limit. That this limit has nearly, if not quite, been reached will appear evident if we reflect on the great achievements of modern operative surgery. Very little remains for the boldest to devise, or the most dexterous to perform.

With all these brilliant results and triumphs of the knife, practical surgery travelled in another direction, which is apparently so opposite that at first sight it is difficult to understand how it could progress simultaneously and contemporaneously in both these lines. There has been, in fact, a tendency to limit the use of the knife by the application of various mechanical and manipulative aids, which is well illustrated in many branches of minor surgery, but especially in the treatment of aneurism and of stone in the bladder, where the tourniquet and compression, and more recently electricity, have been substituted for the ligature, and the lithotrite for the knife.

But if modern operative surgery has attained to so high a pitch and excellence, how stands it with that other great school—the scientific? Here, so far from having come within view of the final limit, we are as yet but halting on the threshold. The scientific school of surgery, which may be said to have been founded by the illustrious John Hunter, has been adorned by names the most brilliant in the annals of British surgery. The Bells and Abernethy, Travers and Brodie, by their teachings and their writings on surgical pathology, exercised most potent influence on their contemporaries, and laid the foundation of the science of modern surgery. But this school could not be considered as existing in a distinct form until surgical pathology itself was consolidated into a system in those admirable lectures which were delivered nearly a quarter of a century ago at the Royal College of Surgeons by Sir James Paget, and which have never been surpassed for depth of philosophic research and comprehensive scientific thought. Since then surgical pathology has been regarded as a distinct department.

In the advancement of scientific surgery every department of physical and natural science has been laid under contribution. Electricity, for instance, is beginning to play a distinct part in the diagnosis and treatment of surgical disease. The applications of the results of the more advanced doctrines and discoveries in natural science have equally tended to the realisation of some of the most important achievements of which modern surgery boasts. The idea of the employment of antiseptics in modern surgery was furnished to Lister by the study of the investigations of Pasteur on the production of disease in some of the lower forms of animals, by the development of organisms which, deposited on a favourable nidus, were capable of producing changes of a fermentative character. Nor has the more careful study of descriptive anatomy been without great importance in scientific surgery. By his observations on the ilio-femoral ligament, Bigelow has produced a complete revolution in our knowledge of the mechanism of dislocations at the hip-joint, and the methods of their reduction. But there is probably no collateral branch of knowledge that has a closer and more direct bearing on the advance of surgical science than hygiene. The relation of hygiene is twofold—first, in its application to the prevention of surgical diseases and deformities, and secondly, in its influence on the results of surgical interference or operation. As a preventive of surgical disease, hygiene can possibly assist us in modifying or arresting the impairment of assimilation on which certain calculi—and, as Professor Haughton has lately shown, cleft palate—depend. But the good influence of hygiene is most desirable in the results of surgical operations; and here is the greatest room for advancement and improvement, for although the manipulative part of operations is now almost perfected, the results have by no means kept pace with this advancement, and much remains to be done in order to render operations more successful and less fatal.

WESTMINSTER HOSPITAL.

INTRODUCTORY ADDRESS BY MR. GEORGE COWELL.

AFTER discussing the objects of an introductory lecture and welcoming past and present students, a short sketch was given of the history of the Hospital and School, and mention was made of some of the celebrated physicians and surgeons who had been members of the staff during the 159 years of its existence. The changes in the school were then alluded to, and especially the arrangements which had been made with regard to clinical lectures and clinical teaching. The question of preliminary education was next discussed, and its importance in the present day, when every branch of science was reaching such giant proportions. Just as we develop the body by the proper exercise of its various muscles, so must the mind be developed by early training of its reasoning powers. No one would dream of teaching a man the art of fencing until he had been put through a course of gymnastics to develop to some extent a precision and ease and rapidity of movement; and can it be wise to put a man to study a profession which requires more than any other the facile use of the reasoning faculty, without first training those faculties by the gymnastics of preliminary education? The only remedy for neglect of early education is indomitable perseverance, and John Hunter was mentioned as an example. The objects of a medical school were to classify the work of the student, to guide him in the use of his reasoning powers, and to teach him to observe and think for himself. Success, self-respect, confidence, all depended upon good honest work. Each man must get up his work for himself, and if it was to be of any use to him he must digest and assimilate it himself.

After pointing out the best mode of doing this, the first-year's man was told that in the dissecting-room he should be at home—in the wards a stranger. "I wish," said Mr. Cowell, "I could say that he had no business in the wards at all. At present this can only be said when the student enters at a medical school for the whole of the period of four years. Unfortunately, most students have disposed of one of their four years before coming to a medical school, and as the Colleges of Physicians and Surgeons require three winter sessions' attendance in the wards, a counter attraction exists which too frequently allures the first-year's student from his proper work, and affords a ready excuse for neglecting what is to many the less interesting and more difficult part of medical study. Much has been done of late years by the examining bodies to separate the study of the more purely scientific branches from those which are more practical. It is not many years since one examination in all the subjects, at the end of his curriculum, afforded the student the means of enrolling himself amongst the ranks of the medical profession. Now all this is changed. The subjects are divided between a primary and a pass examination. But the change will not be complete until the course of study is as widely separated as the examinations. I trust that the day is not very far distant when the college of natural science will be distinct from the medical school. A few colleges in London would suffice for teaching anatomy, physiology, chemistry, zoology, botany, and natural philosophy, and then the hospital school proper would not be entered until the student had become more or less well grounded in the subjects I have named, and had passed his primary examination. How much more valuable would then be two years of hospital work; how much more fitted would the student be to understand and profit by all that he heard and saw in the wards and in the post-mortem room; with how much more interest and intelligence would he be able to follow lectures on medicine and surgery, and the other subjects it is necessary for him to study, than is possible now for the second-year's student, who has to spend his time rushing from the dissecting-room to the

wards, and from the wards to the lectures on medicine and surgery."

The progress of physiology and pathology was next discussed, and the nature of inductive reasoning from which both are built up was explained, a comparison being made with the reasoning of a pure science, such as mathematics, and this led to a discussion of the question, Are science and religion opposed to each other? Opposite opinion was held and reasons were given for referring all science and religion to the same laws, the work of one and the same Lawgiver. There was a unity of purpose and an identity of design throughout the whole to which the idea of antagonism and contradiction was repugnant, and could not be maintained. It was to be feared lest we mistook the speculations of scientific men, the theories of those who have allowed their imagination to carry their thoughts far beyond the conclusions that their facts would warrant, into the unseen world of fancy. These must not be mistaken for true science.

In conclusion, the highest attributes of the profession were insisted upon, and it was shown that if medical men could not look forward to high honours and rewards, still no professional man could look back upon a long life of usefulness with greater pleasure or with a more perfect consciousness of having aided his fellow-men.

ROYAL VETERINARY COLLEGE.

PROFESSOR COBBOLD'S INTRODUCTORY ADDRESS.

THE lecturer, after congratulating the many members of the veterinary profession there assembled upon the progress of that important division of the healing art which they so honourably represented, addressed himself especially to the students of the previous year. It was, he said, most gratifying to find that they had entered so heartily into those studies which had only recently been added to the curriculum; and, in connexion with the weekly botanical excursions, the interest they had displayed in the study of phanerogamous plants far exceeded anything the lecturer had witnessed during the several years he taught botany at two of the metropolitan medical schools. It was, however, principally with the parasitic diseases of animals that he had to deal. Dr. Cobbold remarked that Professor Parkes, of Netley, in a recent able address, had alluded to the great obligations under which medical science in general, and veterinary science in particular, were placed by the labours of helminthologists, and he pointed to recent evidences from India as showing the supreme value of the study of the entozoa. After producing lamentable proofs of the utter ignorance which existed in the veterinary profession respecting the internal parasites of animals, the lecturer maintained that no one had any right or title to be considered a good hippopathologist who did not familiarise himself with the entozoa of the horse. In reference to questions of agricultural and general hygiene, the neglect of the study of entozoology was also quite unpardonable. After quoting the opinions of Dick, Youatt, Varnell, Simonds, Gamgee, and other well-known veterinary authorities, the lecturer incidentally alluded to the circumstance that Professor Williams, the late Principal of the Edinburgh College, had entrusted to him the writing of a chapter on Parasites to be included in Mr. Williams's forthcoming treatise on the "Principles and Practice of Veterinary Medicine."

At the close of the address Dr. Cobbold called attention to the improvements effected in the College premises, and to the great interest the governors took in the welfare of the institution. The recent visit of H.R.H. the Duke of Cambridge had lent great support to the cordial and united efforts of all concerned in the promotion of the cause they had so much at heart. The Treasurer, Mr. Bosanquet, presided.

MESSRS. STUART AND CO., Fine Art Studio, Highbury, have forwarded to us portraits of Dr. Harley and Dr. George Burrows, executed on a new principle which the patentees call "Litho-type Engraving," and which form the first of a series of portraits of members of the profession which Messrs. Stuart are about publishing. Of the present specimens we can speak in high praise.

TANGIER AS A WINTER RESORT FOR INVALIDS.

BY ARTHUR LEARED, M.D., F.R.C.P., M.R.I.A.,
SENIOR PHYSICIAN TO THE GREAT NORTHERN HOSPITAL.

A PAPER of mine on "Tangier as a Winter Resort" was published in THE LANCET of Jan. 4th of the present year. As some proof of the interest which belongs to the subject, it may be mentioned that this paper was reproduced in the *Gibraltar Chronicle* and also in some American papers. It is, indeed, curious that Tangier is better known and appreciated by Americans than by ourselves, who are comparatively near the locality. Since the date mentioned, however, many communications have been made to newspapers in England and Scotland on the subject of Tangier and its climate.

It was stated in the paper referred to that, "unfortunately, no systematic record of the weather has been kept at Tangier." In this I was in error, as a careful series of daily observations was made, with a very few breaks, during the whole of 1872 by the late Mr. Plumer. The results of these observations have been placed in my hands, and are given in the subjoined table.

Although this table is incomplete because only a single daily observation is noted, it indicates a remarkable uniformity of temperature. In the months which chiefly concern the invalid—namely, November, December, January, February, and March—the thermometer ranged only between 66° F., the highest point reached, and 50° F., the lowest. In my previous paper I have shown that the variation between the day and night temperature is very small. In bronchitic cases this uniformity is of especial importance, and contrasts favourably with the extremes met with even in some of the most frequented health-resorts. Thus, at Nice, Mentone, and even Hyères it is not uncommon in winter to find the thermometer at the freezing-point.

In addition to the cases previously mentioned as having notably improved by a winter residence at Tangier, two others have come under notice, and may be briefly referred to.

Mr. B——, a young gentleman who had lost two sisters and a brother from phthisis, was attacked with all the symptoms of the disease, including repeated hæmoptysis, in the winter of 1867-8. Change to the south coast of England and to Brittany was of some use, but he soon relapsed. At the beginning of the following winter he left England for Malaga, and when at Gibraltar, on the way there, went across to Tangier for a short visit. But it happened that it was meantime declared that quarantine would be required from persons coming from Barbary to Spain. On this account Mr. B—— remained at Tangier four months. "The improvement in my health," Mr. B—— writes, "during this time was marvellous. The cough and expectoration entirely ceased, and I got stronger every day. No one who had not seen me when I arrived would have supposed that I had visited the place on account of health, as I looked and felt almost perfectly well. I was so set up that I was able to remain in England throughout the following winter; but in the succeeding autumn all the bad symptoms returned. A second winter in Tangier was accompanied by the same beneficial results, and I have passed the three last winters there with the same unshaken confidence in the place. I always feel a hundred per cent. better there than I do anywhere else."

Mr. C——, a gentleman so troubled with chronic bronchitis that he finds it impossible for him to remain in Scotland after October has set in, also speaks very favourably of the beneficial effects of the climate of Tangier in his own case. He writes: "The advantages of Tangier are the invariable climate, the mild temperature, the variety of food, and moderate cost of living. Europeans are specially protected from native insult, and can go everywhere." I have hitherto not met with any unfavourable reports. The united testimony of many intelligent invalids and other persons is so strong that, joined with my own observations, I do not hesitate to recommend Tangier to the favourable consideration of the profession.

READINGS OF THE THERMOMETER (FAHRENHEIT'S) AT TANGIER DURING THE YEAR 1872.

The instrument was exposed, in the shade, to the open air, in the "patio" of Mrs. Carleton's boarding-house.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	55°	58°	62°	62°	65°	70°	73°	74°	—°	71°	66°	54°
2	58	—	61	63	65	71	76	75	—	70	64	54
3	60	—	62	63	66	70	80	76	—	70	63	54
4	58	58	63	62	68	75	80	73	—	65	64	—
5	60	61	63	64	62	72	81	74	—	64	66	52
6	59	—	60	62	64	71	78	75	74	58	64	57
7	55	—	57	62	62	71	79	76	74	—	64	50
8	56	—	54	62	64	70	77	78	75	—	66	—
9	60	60	56	64	66	68	75	74	76	64	65	59
10	60	60	58	67	65	66	74	75	76	68	—	—
11	59	61	60	66	65	66	79	74	79	60	62	55
12	58	60	58	66	65	70	74	78	77	60	61	—
13	60	60	60	64	65	72	77	78	—	—	56	—
14	61	62	60	65	65	73	76	81	—	—	56	—
15	56	60	60	65	65	71	80	80	78	—	54	50
16	54	56	59	64	70	71	74	78	77	—	59	—
17	57	58	62	68	71	73	76	73	79	—	61	52
18	58	56	64	66	67	78	74	74	—	59	60	54
19	58	60	64	62	65	72	75	76	72	62	59	55
20	56	61	64	58	68	76	78	75	72	66	61	52
21	56	61	65	60	65	77	68	78	77	64	—	54
22	57	58	64	62	66	80	75	—	75	63	—	—
23	59	60	59	62	65	83	77	—	—	60	59	60
24	60	59	56	60	62	74	78	—	68	61	—	55
25	—	62	58	61	62	74	79	—	70	63	—	60
26	56	61	60	65	66	77	75	—	67	63	59	—
27	57	64	62	61	64	76	74	—	74	66	58	53
28	60	61	63	62	65	80	76	—	73	—	—	57
29	57	63	66	64	68	76	72	—	70	62	58	52
30	—	...	60	64	72	75	71	—	70	64	60	51
31	60	...	60	...	—	...	75	75	...	65	...	...
Highest	61	64	66	68	72	83	81	81	79	71	66	60
Lowest	54	56	54	58	62	66	68	73	70	58	54	50

Old Burlington-street.

A CASE OF

ACUTE OBSTRUCTION OF THE BOWELS OF FIFTEEN DAYS' DURATION; COLOTOMY; RECOVERY.

BY JOHN WILSON, M.D., M.R.C.S.E.,

JUNIOR SURGEON, ROYAL ALBERT HOSPITAL, DEVONPORT.

ON June 30th I was called to see a widow, J. G——, aged seventy-five. She complained of pain in the iliac regions, where there was slight fulness and increased pain on pressure. There was some amount of general abdominal distension, with clear tympanitic percussion note all over. The bowels had been moved in the morning, but the motion was very constipated. The tongue was somewhat coated; there was no sickness, and the pulse was quiet. As a rule, the patient had enjoyed good health, but about twelve months ago she had been attacked in a somewhat similar manner, with pain in the left iliac fossa. Purgative medicine was at that time administered, and relief followed; something like pus is described as having come away in the stool. The bowels are generally constipated, and for the last two or three months she has had to return a piece of prolapsed bowel after each motion. All the organs healthy. Ordered half an ounce of castor oil immediately, to be repeated if necessary; with a bismuth draught thrice daily.

July 2nd.—Patient has had no fæcal evacuation. The pain in the iliac regions has increased, and, in addition, there are paroxysmal, cramping pains all over the abdomen. The general distension is somewhat greater. There is a good deal of rumbling noise in the bowels, with occasional sickness. Pulse 96, regular; urine scanty. Ordered, ice to suck, an ounce of castor oil immediately, and a large injection of soap and water.

3rd.—Only a few small pieces of fæcal matter brought away with the injection. Passed an uneasy night. Pain and distension of the abdomen about the same; tongue coated; sickness relieved by the ice; percussion note perfectly clear over the front and lumbar regions of the abdomen. Ordered, injection of castor oil and spirit of turpentine; a pill consisting of a quarter of a grain of extract of belladonna and a quarter of a grain of opium powder; and a draught composed of two drachms of sulphate of magnesia, ten minims of tincture of hyoscyamus, and ten minims of sulphuric ether, every four hours.

6th.—Since the last note injections have been administered daily, the pill and draught have been taken regularly, but only a few small pieces of fæcal matter have come away. The distension of the abdomen has gradually become greater, particularly in the iliac regions. There is still occasional sickness, with some frequent attacks of the paroxysmal cramping kind of pain. To-day an attempt was made to pass the long tube; it was found impossible, however, to get it beyond the promontory of the sacrum, and the quantity of injection retained was only about as much as might be held by a distended rectum. The pulse has ranged between 90 and 95; tongue moist, but coated. The same treatment continued.

9th.—Since the last date the distension of the abdomen has increased, the sickness has been more frequent, and the food and medicine have been taken with reluctance. Two or three pieces of fæcal matter are still all that come away with the injection; no flatus has been passed. To-day a slight dulness on percussion can be defined in the left iliac fossa. Urine still scanty. Ordered two minims of croton oil and eight grains of scammony powder; draught and pill as before.

10th.—The powder has caused much griping pain and sickness, but no evacuation of the bowels. The dulness in the left iliac fossa has increased slightly; pulse 90, regular and of fair strength. To have two grains of extract of conium in the pill instead of the opium; injections &c. as before.

11th.—Unrelieved. The croton oil repeated.

12th.—Unrelieved. The pain and sickness much increased after taking the croton oil; general appearance bad. All purgatives by the mouth stopped; pill and injections continued.

13th.—The dulness in the left iliac fossa is more marked; all the other symptoms are unrelieved. To-day my brother, Dr. W. C. Wilson, saw the patient with me, and colotomy

was suggested as likely to offer a chance of relief if other remedies failed.

14th.—The sickness has become almost constant, but the vomited matter is not stercoraceous; the abdomen is very much distended; the pain is very great, and she has had no sleep; pulse 108 and weaker.

15th.—The sickness, the pain, and the obstruction continuing, my colleague, Mr. Bulteel, saw the patient in consultation with me. He concurred in the propriety of performing colotomy. The operation was performed in the afternoon.

The colon was opened in the left loin, and a very large quantity — nearly a washhand-basinful — of liquid fæces escaped. The bowel was very dark and friable, presenting all the appearances of strangulation; the superficial veins were much enlarged, varying from about one-sixteenth to one-eighth of an inch in diameter, and full of blood. It was fixed in the usual manner to the edges of the superficial wound, the wound itself, however, not being brought together with sutures, but merely covered over with lint soaked in diluted carbolic acid.

The progress of the case towards recovery has been uninterrupted. Sickness ceased from the day of the operation; pain has been easily relieved with small doses of opium. In two days the bowel began to regain its natural colour. On the third day a few ounces of fæcal matter came away from the anus, some portion of it being hard and lumpy; and about once a week ever since there has been about the same quantity. For the first two days the pulse remained at 114; on the third day it fell to 96, and it has not been higher since. The catheter had to be used for a few days. The wound healed rapidly, and on August 19th, thirty-five days after the operation, she had so far recovered as to come downstairs dressed; a plug in the artificial anus enabling her to move about with a wonderful amount of comfort.

In all cases of obstruction of the bowels the great difficulty is to localise the seat and to define the cause. In the case just narrated we were led to the belief that the obstruction was in the large intestine and in the sigmoid flexure by the following reasons:—Firstly, by the slow but gradually increasing distension of the abdomen; secondly, by the occasional character of the sickness in the beginning of the attack, and its increasing frequency as time went on; thirdly, by the inability to pass the long tube beyond the sacrum, and the small quantity of injection retained; fourthly and principally, by the fact of the late development of dulness in the left iliac fossa, pointing to an accumulation of fæcal matter above the obstruction; and lastly, by the general aspect and condition of the patient. The only exceptional symptom was the small quantity of urine passed. Then as to the cause of the obstruction. Dr. Fagge, in the Guy's Hospital Reports for 1868 has enumerated six heads under which most cases of intestinal obstruction may be placed. They are—1. Plugging of the bowel by its contents. 2. Intussusception or invagination. 3. Strictures situated in the coats of the intestine. 4. Contraction situated exterior to the coats. 5. Volvuli, folds, or twists of the intestine. 6. Internal strangulations. Accepting this classification as being the best for all practical purposes, under which of the heads were we to place the case? The habitual costiveness of the patient with the attack twelve months previously pointed to plugging by the contents of the bowel; the prolapse of the rectum for the last two or three months indicated intussusception; and the great liability of the sigmoid flexure to volvulus made it a very possible cause. The previous history and the symptoms in the present attack clearly excluded stricture in the bowel, contraction outside of it, and internal strangulation. Intussusception was eliminated because of the great rarity of its occurrence in the rectum, and by a careful digital examination. Of the two remaining causes it is difficult to decide which had most to do with the obstruction. Probably there may have been some amount of plugging of the bowel by its contents; but that a condition of volvulus supervened is almost certain, when we take into consideration the very fluid state of the fæces in the colon.

The dark colour of the muscular and mucous coats of the intestine was an unexpected, though it ought not to have been an unlooked-for, result of internal pressure from the large fæcal accumulation. The appearance was exactly that of the bowel in some cases of strangulated hernia; and until fæces began to flow there was some doubt whether strangulation, external to the intestine, had not taken place. The fact that death of the intestine may be caused by internal as well as external pressure cannot be too clearly borne in mind, and is very important when we consider the question of colotomy and the right time to perform it. In this case, in fifteen days the condition of the tissues showed that relief had not come a day too soon. Perhaps in a younger subject with more perfect capillary circulation, and in others with less accumulation and therefore less pressure, the changes towards death of the tissues might not take place so rapidly; still, the danger of early death and early rupture of the intestine, from internal pressure in cases of obstruction, ought to be sufficiently weighed and considered when delay is recommended, and nature or medicine is trusted to to yield relief. The operation is not very difficult, and, apart from concomitant circumstances, would not be very fatal. At any rate it is encouraging to find that even—as in this case—at the advanced age of seventy-five recovery is possible.

Devonport.

OVARIOTOMY FIVE WEEKS AFTER CONFINEMENT; ALBUMINURIA; DEATH ON THE THIRTY-NINTH DAY.

BY JOHN C. GOODING, M.D. EDIN.

MRS. D——, aged thirty-two, has always enjoyed excellent health. Married two years and eight months; was delivered by forceps on May 1st, 1873, after a lingering labour (the pains almost ceasing at last), of a healthy female child. The convalescence was quite satisfactory until May 8th, on the evening of which day she was seized with rigor and vomiting, followed by fever. For this I could discover no obvious cause; there was no abdominal nor other pain. Under treatment the febrile condition subsided by the 13th. During the attack the lochia were suppressed, but returned and were offensive, necessitating the use of injections. On the 14th there was another rigor followed by febrile symptoms, attributed by her to exertion with the baby, as the first had been to some unpleasantness with the nurse. On careful internal examination I could detect no cellulitis nor other local inflammation, nor tenderness anywhere; but in the right iliac region there was a globular, painless, elastic swelling. The febrile condition again subsided, but on the 21st rigor for the third time recurred, and high fever followed. Between the 14th and 21st the tumour in the iliac region steadily increased, fluctuated, was movable and still painless; it closely simulated a distended bladder, only it was to the right; the catheter drew off two or three ounces of urine. The fever did not again subside, nor was the rigor repeated. I came to the conclusion that the symptoms were due to an inflamed ovarian cyst, probably secreting pus. On the 28th there was pain and tenderness for the first time over the centre of the tumour, which now reached to the median line and as high as the umbilicus.

I told the friends my opinion, and that I considered the only chance of recovery lay in the removal of the tumour; and suggested, in so grave a state of things, the desirability of a consultation. On the 30th Dr. Evans, of Gloucester, saw her, and agreed in the diagnosis of inflamed ovarian cyst. We determined to try the effect of counter-irritation, morphia subcutaneously, and other antiphlogistic treatment; and, should there not shortly be evidence of amendment, to give the patient the chance of life by operating.

From May 30th to June 5th there was no improvement. The temperature ranged in the morning from 100° to 102°, in the evening from 103·1° to 104·1°; the pulse from 116 to 126. There was profuse sweating; scanty urine loaded with lithates; and not infrequently vomiting, although the patient was able to take moderate quantities of beef-tea, milk, and iced champagne. The strength was fast failing. The tumour continued to enlarge, reaching by June 5th five inches to the left of, and four above, the umbilicus. So quickly did it increase, and so distinct was the fluctuation,

that the fear of spontaneous rupture was constantly before me.

On June 5th, thirty-five days after her confinement, Dr. Rooke administered chloroform, and, kindly assisted by Mr. Hawkins and Mr. Newton, I proceeded to operate. A four-inch incision between the umbilicus and pubis exposed the characteristic pearly cyst. A few ounces of clear serum welled up, and were pressed out. Some recent adhesions to the anterior wall were easily broken down. The contents were then evacuated, and the cyst gently drawn out; with it came thickened omentum, to which, over a surface four inches by three, it was adherent; this was easily separated, and the moderate oozing controlled by pressure between the hand and sponge, and the omentum replaced. The pedicle, of good length and narrow, was clamped and the cyst cut away. The uterus was of normal size. The wound was closed with silver sutures, and supported by cotton wool and strapping. There was no traction on the clamp.

The cyst contained nine pints of turbid, offensive fluid, in which floated flakes of pus. Its interior was lined by a layer of pus which could be peeled off in strips. There was a secondary cyst as large as an egg, and two or three smaller, all similarly lined. The empty cyst weighed one pound; its walls were not attenuated, but appeared thinnest where adherent to the omentum.

The patient rallied well, and at 6.30 P.M. the pulse was 99; temperature 101·2°. Two ounces of clear urine were drawn off. At 12.30, pulse 108; temperature 101·2°. Three ounces of healthy urine. Skin warm and moist; takes ice freely; expresses a wish for milk.

June 6th.—Patient slept well after thirty minims of nepenthe; feels comfortable; has passed urine voluntarily on several occasions; skin warm and moist; no sweating; tongue slightly furred and moist. Was a little sick in the evening and somewhat irritable. In the morning the pulse was 102; temperature 99·8°. In the evening pulse 112; temperature 101·7°. Given a third of a grain of morphia subcutaneously.

8th.—Has taken chicken-broth and other light nourishment with relish. Tongue nearly clean; urine free and clear. Slept well after the morphia. Flatus passed. In the morning the pulse was 108; temperature 103°. In the evening pulse 102; temperature 101·8°.

9th.—Wound dressed to-day; it had been free from odour, and was not previously disturbed. The clamp was surrounded by thin offensive discharge. The deeper structures had firmly united, but there was no union of skin. In the morning the pulse was 108; temperature 102·2°. In the evening pulse 120; temperature 103·2°.

10th.—Bowels acted twice. No appetite. In the morning the pulse was 92; temperature 100·2. In the evening pulse 120; temperature 103°.

11th.—Bowels acted again. Two stitches next to clamp were removed. In the morning the pulse was 96; temperature 100°. In the evening pulse 126; temperature 103·8°.

12th.—Feels better, and takes nourishment more kindly. In the morning the pulse was 92; temperature 98·5°. In the evening pulse 98; temperature 99·5°.

13th.—Removed last two stitches, as they had cut through the skin. Abdomen has at no time been distended, or the clamp depressed. In the morning the pulse was 102; temperature 99·6°. In the evening pulse 104; temperature 100·5°.

15th.—Has slept well and taken food better. The wound begins to show granulations. The clamp came away at the evening dressing. In the morning the pulse was 104; temperature 100·4°. In the evening pulse 110; temperature 100·2°.

16th.—Has been troubled all day by a neighbouring skittle-alley and the heat; is flushed and feverish. Stump depressed about an inch. The tongue is clean; appetite bad; urine free and healthy. In the morning the pulse was 100; temperature 100·3°. In the evening pulse 120; temperature 101·2°. Ordered wine and quinine.

19th.—Sleeps well and takes nourishment. Is more comfortable in a larger room to which she has been removed. In spite of care a bed-sore threatens. The wound granulates very slowly; there is no union of skin yet. To-night the skin is dry and hot. Pulse 140; temperature 103°.

22nd.—The temperature came down one degree each night; but it is 103° again to-night. The urine is scanty, and contains blood. The pulse is quick and the skin dry. She feels discomfort rather than pain in the loins. Ordered to omit wine, and morphia injections; hot poultices to loins, and to take solution of acetate of ammonia, antimonial wine, and tincture of aconite in a mixture.

23rd.—Was sick during the night. Urine clearer, but is loaded with albumen. Tongue clean. A narrow slough an inch long is separating over sacrum. Evening: Pulse 126; temperature 100·4°.

24th.—Green fluid vomited on several occasions to-day, for which effervescing mixture was ordered with iced champagne. Perspires freely. Frequent desire to pass urine, which is muddy. Morning: Pulse 110; temperature 99·8°. Evening: Pulse 116; temperature 100·4°.

27th.—Sickness was relieved, and nourishment fairly taken. Healthy action of bowels yesterday. Perspires freely. Urine freely passed, albumen in quantity; microscopic examination of the scant deposit shows abundant hyaline and granular casts, pus-globules, and crystals of uric acid. Bed-sore cleaning. Wound healing. Morning: Pulse 124; temperature 100·2°. Evening: Pulse 120; temperature 102·4°.

29th.—Ordered twenty grains of bitartrate of potash every six hours, as the urine had diminished in quantity, and the patient did not appear so well. Morning: Pulse 120; temperature 101°. Evening: Pulse 108; temperature 102·5°.

July 3rd.—There is nausea; the patient gradually loses strength. About one pint of urine, unchanged in quality, is passed in twelve hours. She perspires, especially at night. There was yesterday twitchings of the extensors of the fingers. The bowels acted four times to-day; the bitartrate was therefore omitted. The poultices have been continuously applied. For the last three nights the temperature had been above 103°; pulse 120.

7th.—Temperature has continued high, and little difference between morning and evening—upwards of 103°. Muscular twitching of the arms, forearms, and face have gradually become more frequent; so that it is now incessant. She wanders, and is drowsy. Pulse exceedingly feeble; perspires freely; passes urine and stools unconsciously. Condition desperate. Ordered half a drachm of bitrate of potash every four hours.

8th.—The twitchings have been scarcely perceptible to-day, and she wanders less; but continues to pass evacuations unconsciously. There is not so much albumen in the urine. Skin acts well. Morning: Pulse 120; temperature 101·6°. Evening: Pulse 115; temperature, 101·5°. Bitartrate of potash every six hours.

13th.—The slight amendment was only temporary after the bitartrate; and this had to be discontinued because of diarrhœa. The twitchings and drowsiness returned; vomiting of green fluid became frequent. Prostration ensued, and slowly came death.

During the last few days the wound, which had, except the narrow centre of the stump, completely cicatrised, opened up; but the peritoneal cavity remained closed. At no time was there anasarca or local œdema.

Cheltenham.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

The annual meeting of this Society was held on the evening of Sept. 29th, in the library of the Newcastle Infirmary. Dr. Philipson, President, occupied the chair. The following is a list of officers appointed for the ensuing year:—President: Dr. Philipson. Vice-Presidents: Drs. Burnup, L. Armstrong, Peart, and Mr. Broadbent. Honorary Secretary: Mr. Henry E. Armstrong. Committee: Drs. Denham, Humble, Arnison, B. Bramwell, and Page, Messrs. C. Carr, Hawthorn, Russell, and Redmond.

AN anonymous donor has placed a large sum in the hands of the Committee of the Birmingham and Midland Institute, for the foundation of a Lectureship on the Laws of Health, and also for a prize fund in connexion with the class. Dr. Corfield has been offered the post for this year, has accepted it, and will deliver an inaugural lecture in the Town Hall, Birmingham, on Thursday, October 9th, at 8 P.M., on "Sanitary Progress." The course will begin on Tuesday, October 14th, at 8 P.M., and be continued on succeeding Tuesdays until some time in April. It is intended more especially for the working classes, and both men and women will be admitted.—*Nature.*

THE LANCET.

LONDON: SATURDAY, OCTOBER 4, 1873.

BY the time this has reached our readers the new session will have been inaugurated by introductory lectures or social gatherings, all the Medical Schools of this country having doffed their temporary quiescence and become busy hives in which teachers and students will, for the next six months, vie with each other in accomplishing the greatest amount of good and making the most extensive progress. We trust that those who return to work have benefited by their rest, and are now prepared to prosecute more earnestly than ever the studies which have for a time been laid aside, and that the ensuing session may be characterised by individual and general advancement. Much has to be achieved by teacher and pupil, and without hearty co-operation the results will be more or less nugatory. Not only will the old ground have to be reiterated, but new fields must be explored, and fresh acquisitions made. As we have previously fully addressed ourselves to those who are now for the first time enrolled as medical students, it only remains for us to offer them a hearty welcome, and to hope that they may find their new pursuits as entertaining and as profitable as their highest anticipations have led them to suppose.

This week our object will be to endeavour to show how student and teacher may best ensure true advancement. At the commencement of the vacation we took the opportunity of pointing out certain deficiencies in medical tuition, and suggested certain modifications for the ensuing session. Some of these we are pleased to find have already been adopted, and will henceforth be carried out in the teaching departments of some of the great medical schools. It is to be feared, however, that we are not yet able to realise fully the greatest good to the greatest possible number. In fact, considering the vast amount of expensive machinery at work, the result must be regarded as little more than a minimum of what is possible. It would be difficult, perhaps, to particularise any one flaw and make it responsible for all failures; but there are certain deficiencies which stand out very prominently, and which are, therefore, more tangible than many of the more hidden but not the less injurious intricacies. It may safely be asserted that the chief causes of the tutorial inefficiency at the medical schools are the faulty way in which instruction is given and the lax and irregular manner in which it is received. There is no check upon the student, and no guarantee that he takes full advantage of all the opportunities which are afforded him of acquiring knowledge. Students entered at medical schools are left to their own discretion and inclination without any efficient regulations for compelling them to avail themselves of the proffered instructions or any means of ensuring their comprehension of those subjects they do attend. It may be argued that to make attendance on studies more binding would be to interfere with the liberty of the student, and to take away all choice of procedure, thus depriving him of the opportunity of giving full and willing attention to the subjects in which he is most interested. This argument is specious and sophistical; for in a properly-directed curriculum no subjects should be included that are not more or less essential to a complete education. Further, the young student cannot possibly know which subjects are necessary and which superfluous. It is enough for him to feel that the course of study has been decided upon by older and wiser heads than his, and is regulated by those who have passed through a similar pupilage. Some means, then, should be adopted to secure the attention of the student to the prescribed course of studies, and to ensure his progress in it. As it is, he is left to a great extent to decide for himself what he should do, and when he shall do it; and very rarely is he compelled to show that he has acquired sufficient knowledge of his subjects before presenting himself at the examining boards. An idle student, therefore, will prefer to gain his knowledge from short and superficial manuals rather than to labour at what appear to him to be dry and unnecessary details. The result is that if at his examinations he succeed in satisfying the examiners, he will be allowed to practise his profession on an incomplete, and may be dangerous, knowledge. Failing this, he is politely "referred" for a definite period to again skim over his little pocket "coaching" manuals. But whatever be the immediate result, discredit is ultimately brought upon the school at which he has studied, or rather at which he is supposed to have studied. It is desirable, therefore, that before a student presents himself for public examination he should possess certificates from his teachers of having gained sufficent knowledge to justify his attempts; and power ought to be invested in the teachers by which any one of them could preclude for a given period from examinations any student who has not satisfied him of his proficiency.

To secure this, however, it would, we regret to say, be necessary in some instances to improve the teachers themselves, or at least their instruction. As we remarked some weeks ago, medical teaching is deficient in quantity, quality, and the manner in which it is given. Frequently a man is appointed a lecturer on or teacher of a certain subject simply because he possesses a reputation of having paid some attention to it; sometimes, however, he has not even this qualification, but by holding a certain position on the staff he is compelled to take it. In the collateral branches of medical science—as in chemistry and botany, for instance—it is not at all uncommon to find the lecturer a man who, beyond possessing a knowledge of his subject, is utterly unfit to instruct medical students. Some teachers of these subjects are too profound, and some too popular, and fail to impart the kind of instruction that the medical student requires. In this doubtless lies to a considerable extent the cause of the scanty and imperfect knowledge which medical men as a body possess of these subjects. It is, however, in the clinical departments that medical education is most defective and yields the most unsatisfactory results; for although a certain course is generally prescribed in the prospectus, no definite system is preserved. The instruction is given in a most desultory manner, and at uncertain and irregular periods. And this state of things, which is, per-

haps, necessarily attendant on the present system, affords additional proof of the pressing need of a radical change. Proper education cannot be given unless the tutorial staff be efficient in number and quality. By quality is meant the tact in teachers to seize upon salient points, and a natural or an acquired facility to impart to others the knowledge which they themselves possess. It is in these very particulars, however, that teachers mostly fail. They are not wanting in knowledge, nor are they without certain powers of observation; but, through want of ingenuity or experience, they are unable to disclose to others their hidden treasures. Hence the desirability of having instructors who are themselves trained to their work. This can only be secured by installing them into office at an early period of their career—in fact, by never allowing them to forget the methods by which they first acquired the fundamental knowledge of the art of medicine and surgery. This would be most readily accomplished by increasing the junior staff at the medical schools, and thus appointing as tutors men of tried ability, who should be entrusted with the educational care of junior students. At present the majority of teachers are appointed to their posts only when considerably advanced in years and engaged in the pressing and anxious duties of private practice and too busily occupied to devote much time to tutorial labours. It would be found, moreover, that by a properly regulated system of medical tutors the character of instruction would eventually be greatly improved; for then there would be well-disciplined teachers, who would be possessed of an unusual capacity for imparting knowledge. Not only so, but the materials for study would more constantly be made available. Continual practice in, and unremitting attention to, clinical labours, can alone secure an aptness in diagnosing disease and applying suitable remedies. But unaided at the commencement, the student is liable to become confused with the complexity of the manifestations of disease; whereas the judicious assistance of an experienced teacher may not only save from error, but ensure success. It is to be feared, however, that there is an increasing tendency with many teachers to appear learned and profound by astonishing and confounding their pupils, rather than a desire to instruct them in essential and fundamental principles. Clearly the duty of the teacher is to show what is the rule, and not to mystify with exceptions. It is true that a healthy scepticism should be cultivated to a certain degree, but if this be indulged in too far it becomes actively morbid. It is well that the teacher should occasionally ventilate his own theories and freely and honestly criticise all the ordinary methods of practice, but he should not attempt to subvert what is settled by his own crude or obsolete speculations. He must also endeavour to communicate more than may be acquired from any one book, and should carefully compare the teachings of others with the results of his own experience; for if all teachers merely recapitulate what others have said or written, progress will be slow. But great tact and discrimination are always necessary in deciding what to accept and what to reject, and as much harm may be done by a bigoted Conservatism as by the most precipitate Radicalism. Whatever be the particular plan of action, both teacher and pupil will find that true progress can only be made by constant and diligent application, by which those who have but little aptitude will acquire more, and those who have much will not fail to realise the full truth of the proverb, "Unto him that hath shall be given."

IT is to be supposed that the motive which actuates the majority of the subscribers to an infirmary is the desire to do good to others. There are cynical people who detect evil even in the motives of the governors of a hospital; who think that such governors expect a large *quid* for a small *quo*. These disparaging critics do not believe in charity pure and simple. They hold that when a rich man—say a colliery owner or an iron ship builder—gives a guinea to an infirmary, he has a shrewd expectation of getting thirty shillings' worth for his money in the shape of the prompt admission of a workman or of a servant in case of accident or disease. In other words, they believe that subscription to a medical charity means a cheap provision of gratuitous medical service for disabled servants, and their maintenance at the expense of the general body of subscribers. There are too many facts in the history of most hospitals and dispensaries to support such a view. Nevertheless, we do not believe in it; and we are glad to find that the Committee of the Sunderland Infirmary have just proposed an important alteration in the rules regulating the admission of in-patients, which shows that they do not believe in it.

The Committee of the infirmary propose to abolish the system of admission by ticket. Hitherto any patient who could procure four dispensary tickets could claim admission into the infirmary, whether his case was a fit one or not; and, *vice versâ*, any sufferer who was too ill or too friendless to procure four tickets might present himself at the door of the infirmary with a disease greatly needing relief and treatment, and have to be refused admission. Governors, in the event of the change proposed by the Committee, will still be required to discharge a most important duty in connexion with the admission of patients. They will be required to certify that they are poor and needy, and not paupers; in other words, that they are fit subjects for admission as far as pecuniary and social circumstances are concerned. The fitness of the case from a medical point of view will be determined by those who alone can be judges—viz., the medical officers. The Sub-Committee appointed to consider this question have drawn up an interesting report setting forth the reasons for the change we have described. The Medical Report, too, strongly urges the change. The change must commend itself to all really charitable persons who wish the fittest cases to be admitted. An open door for every fit and urgent case will enhance the respect for the infirmary in every section of the community, and may be expected to increase the subscriptions from every class. If any unreasonable subscriber feels dissatisfied, his dissatisfaction will be counteracted by the general satisfaction caused by the prompt admission of the fittest cases. It is impossible to define, abstractedly, fit cases. Many acute cases may be unfit for admission. On the whole, chronic cases, as being costly to the patient and difficult of cure, are often the fittest, next to cases of bad accident. But doctors alone can decide which cases it is kindest to admit, and which to refuse admission to; and we sincerely trust that

the public of Sunderland will support the Committee of the infirmary in the change that is about to be made.

We are glad to notice another important change in the Sunderland Infirmary—the introduction of sisters from the Protestant Evangelical Deaconesses' Training Hospital. It has, perhaps, been too much taken for granted that nursing work could only be done by Christian ladies whose faith took a Catholic form. We hope the Sunderland experiment will show that care for the sick is not monopolised by any one section of the Church.

THE preparations for the Ashantee expedition go on apace, and the Government seems intent upon neglecting no precaution likely to render it a success. If half the gloomy anticipations and prophecies under which the expedition has been undertaken be realised, it will prove to be the most disastrous campaign on record. But the pendulum of public opinion swings easily from one extreme to its opposite; and if Sir GARNET WOLSELEY'S task be attended with a fair measure of success, we may expect the appearance of an abundant crop of individuals who are always ready to indulge in that very safe form of prophecy implied in the expression, "I always said so." It is of course impossible to forecast events with much approach to certainty where so many elements of uncertainty are present; but it is puerile to be "wise above what is written," and to indulge in gloomy anticipations of imminent disaster, seeing that all are now agreed in the necessity of prosecuting what we have begun. The war is now indispensable for the maintenance of Imperial interests, and it must be vigorously maintained until the prestige of a tyrannical and cruel potentate be destroyed. No one acquainted with the facts would seek to underrate the dangers of the climate; but we have all along maintained the belief, which we are glad to notice the special correspondent of *The Times* shares with us—and he speaks after long experience on the West Coast,—that these dangers have been exaggerated, and that the chief one is an inactive life in barracks; and neither our officers nor men are likely to be exposed to that. The troops engaged must be moved up from the coast at once; and, explain it as we may, it is still the fact that our soldiers have, when dominated by the excitement of work, marched and fought, with relative immunity as regards health, under circumstances and in situations which would be regarded as eminently unhealthy. The marches must be made in the morning and afternoon, especially the former, the troops resting during the midday. Fatigue must, however, be sedulously avoided; and we regard very early marches as a mistake. Every man should have partaken of some refreshment and be provided with hot tea or coffee before starting, and be allowed to smoke on the march. As a beverage tea is perhaps to be preferred to coffee or cocoa, because it is palatable when cold, though in other respects it is inferior to cocoa and milk. Temperance in living is everything, and no one knows this better than Sir GARNET WOLSELEY; but by temperance we do not mean abstemious living. There are no better safeguards against malaria than good food, warm under-clothing, and the prophylactic use of quinine. A good deal has been said as to the advantage of respirators and mosquito curtains, and we think on good grounds. If the men have to encounter the exposure to night air incidental to the duties of a sentry, they should be protected by some such methods; and we might even make the suggestion that the provision of woollen comforters or of veils, after the fashion adopted by so many persons when *en route* for the "Derby," would not be altogether useless during the daytime. Shelter of some kind is essential at night, and huts might, we imagine, be improvised on the spot; but it would seem that the authorities will not depend upon local supplies, for the materials necessary for the hutting of the troops have been already forwarded. There will of course be abundant supplies of waterproof sheets for the ground. Whenever practicable, a fire should be lighted or a lamp kept burning at night; and we think that officers might do worse than provide themselves with the portable night-lamps used by nurses for preparing infants' food. As regards the clothing, we think that little, if anything, remains to be desired in the dress designed for the soldiers in this expedition. It is probably for the first time in our military history that a thoroughly workmanlike, comfortable attire has been provided for the soldier—one that will protect his person without encumbering him by its weight or embarrassing him by its tightness about the neck and chest. What a shock it would give to the late Duke of WELLINGTON'S, or still more to poor old Sir GEORGE BROWN'S nervous system, if he could see the British soldier, without stock or pipeclay, attired in a very loose-fitting tunic covered with large outside pockets, and armed with his present substitute for that "Brown Bess" on which the the late General grounded his confidence in our infantry regiments! The supply of filters, large and small, is apparently ample; and the number of stores in process of manufacture or already forwarded to Cape Coast will, when landed there, require a strong guard to protect them against the raids of an enemy. It is clear that the campaign will involve a large expenditure of money. If a railroad be constructed, the greatest of all difficulties will have been surmounted—that of transport. And when all is done, what shall we gain if we retire from the country and occupy our old positions on the coast? We are no politicians, but would it not be well for us to establish some military station in the interior, if a healthy situation could be found; to keep the railroad open to it for the transport of troops from the sickly stations on the seaboard; and substitute another and friendly king for the tyrant who at present presides over the Ashantees?

ACCORDING to the newspapers "a doctor" recently sought advice from MR. WOOLRYCH, the magistrate of Hammersmith, under the following circumstances:—A prescription of his had not been accurately dispensed by the chemist. The chemist had put in an injurious ingredient, we presume in substitution of something which the chemist either did not possess or did not care to use on account of its costliness, or, perhaps, with a notion that he could make the prescription more perfect. The applicant said the chemist told him that he left out the most important thing in the prescription, and put in another. He added that some chemists who had not expensive medicines mentioned in the prescription would put in others. Some ill-natured people will immediately say that this is the result of over-educating

pharmaceutists—that by recent legislation they have been so raised in their own estimation that they begin to take a critical and judicial view of prescriptions, and use their discretion in making what they think improvements. It would be going too far to base such a serious charge on this incident. For one thing, the report is somewhat vague. The name of the medical man is not given, and the particulars are not stated. Still in the main the incident is no doubt correctly reported, and suggests some very serious misgivings. We confidently believe that such unfaithfulness in dispensing is rare, and that at no previous time were drugs so good and pure, and medicines so well prepared, as now. Nevertheless, the public is seriously at the mercy of druggists, and—and this is the important point—there seems to be no authority for taking cognisance of and punishing such behaviour as that under discussion. In every view of it the behaviour is very bad. A chemist acts in the dark. His customer has to trust him implicitly; he can generally have no power of detecting dishonest dispensing. There is an additional meanness in dishonesty when it is practised with scarcely a chance of detection. When, further, life and death may be the issues, such dishonesty becomes a great crime. And yet, according to the Hammersmith magistrate, no punishment has been devised by law against chemists who unfaithfully dispense prescriptions. Under the Apothecaries' Act such conduct is severely punishable. An apothecary who either refuses to dispense a prescription—which chemists may do without breaking any law,—or who dispenses it negligently or in an inaccurate way or "unfaithfully," is liable to various punishment, including, in the last degree, the forfeiture of his certificate. In the Pharmacy Act no such prominence is given to the offence of unfaithful dispensing. We can see no reason for such a difference. It is true that the 26th clause of the Act gives the Privy Council power to erase the name from the Register of any person who is convicted of any offence against the Act which in their opinion renders him unfit to be on the Register. But there is great vagueness in this language, and the Privy Council does not much concern itself about such matters. This is a grave defect in the Act, and the sooner it is remedied the better. Meantime, by the Act of 1868, chemists have a monopoly of the work of dispensing physicians' prescriptions; and there is no specific punishment for doing the work inexactly or unfaithfully. If the patient die as a result of the druggist's deliberately altering the ingredients of the prescription, then it would seem that the druggist actually can be charged with manslaughter. Short of this he may use his "discretion" with impunity. This is poor satisfaction to the patients who do not die but who only do not get well from not getting what was prescribed for them. The state of the law, however, is now well known, and we hope that it will be altered. The public are more deeply interested in the matter than even the medical profession. It has great influence—perhaps as great as that of the Pharmaceutical Society, but it is not so likely to use it. And it is quite probable that, until the discretion of some "adventurous" chemist takes the form of manslaughter, pharmaceutists will continue to enjoy all their present immunities under the Pharmacy Act.

Medical Annotations.

"Ne quid nimis."

THE CHOLERA.

WE have hoped week by week that this heading would disappear from our columns, or at all events be seen only for purposes of retrospect. But the records of the past week are not encouraging. Most of our readers know by this time that a small vessel arrived last Monday in the Mersey from Havre, hauled into dock, and was some hours afterwards found to have several cases of cholera on board. Four of the crew have since died, and the vessel is now of course under strict surveillance. But, it has very naturally been asked, how was it that these cases remained undiscovered until the vessel had entered the dock? It is plain either that the Order in Council recently issued is insufficient in its provisions, or that those provisions have not been properly applied. According to our reading of the Order, the Customs officers have in the first instance the onus cast upon them of discovering whether any sickness exists on board, and it is manifest that in this case they failed to ascertain the exact condition of things. We are not, however, very much surprised at this result, because we are pretty certain that the Customs' examination does not at all strike at the root of the matter. A vessel arrives; the Customs' boat comes alongside; a formal set of questions is asked by the officer as he sits in the boat, and is answered by the master or chief officer as he stands on the gangway of his vessel; the latter is then requested to come down into the boat and attest his replies with his signature, and the operation is completed. No means are taken to ascertain the truth of the answers given, and the vessel comes into port with perhaps a cargo of cholera on board. It is clear that the plan now adopted at Southampton should be practised at all ports as regards vessels that arrive from places infected with cholera—i. e., that the port medical officer should proceed on board immediately after the arrival of the vessel *off*, not *in*, the port, examine all persons on board if necessary, inspect the official Log-book, and give a clearance accordingly. This plan is distinctly provided for in Article 7 of the Order in Council, and in our judgment is sufficient to prevent the importation of disease, if carried out in its integrity.

The following ports are, up to the present date, suspected of being infected with cholera: Vilveg (Finland), Dantzic, Konigsberg, Pillau, Stettin, Helsingborg, Cronstadt, Rouen, Caen, Havre, Riga, Naples, Genoa, and Trieste. No case has been imported during the past week by way of the Thames.

MEDIÆVALISM IN THE SICK WARD.

NOBODY can for a moment doubt the great advantages which, on the whole, have accrued to the sick poor in our hospitals by the substitution of sober, respectable nurses, controlled by lady superintendents, for the fat, comfortable, and disreputable Mrs. Gamps who formerly held sway. There are few gains, however, so great as the one of which we speak, which have not some slight counteracting disadvantages, and we certainly think that one of the drawbacks to the system of nursing which obtains in some of the London and provincial hospitals just now is the mediæval costume which the sisters think it necessary to adopt. With the spotless white cap with its spreading wings, and with the long white collar—two articles of dress usually most becoming to those who adopt it—we have no positive fault to find, although we are far from considering it the best head-dress which could be selected. What we particularly wish to call attention to is the third and sole-

remaining item of the visible costume of the nursing Sister of Charity—to wit, the long black woollen robe, with dangling sleeves, and a dangling stole gathered about the waist by means of a woollen girdle. First, we should say that nobody who is employed in nursing the sick ought to be dressed in black—a colour capable of rendering invisible so much of what is generally spoken of as "dirt," and which, in hospitals, is often a putrefactive material with a potency for mischief in the way of pyæmia and the like which few can estimate. Next, the material should not be woollen, but should rather consist of something less absorbent, and with a surface less calculated to permanently arrest whatever floating particles may alight upon it. Lastly, we should say that every costume worn by those in close attendance upon the sick should pay regular, periodic visits to the wash-tub at intervals of not more than a week. Dark hints are abroad that the intervals between the washings of the ecclesiastical garb which is becoming so common in Protestant England are strangely long, and that, although cleanliness is said to be next to godliness, they are sometimes rather distant neighbours. We had thought it was an axiom that all nurses should dress in washing materials, but we fear there is some chance of this important fact being lost sight of. While, however, we are speaking thus of the "sisters" we must not forget that there are others who need to be reformed in the matter of costume. It is too much the practice for house-surgeons and dressers to devote some old coat for hospital use, which they wear wherever dirty work is to be done, be it in the wards, the operating theatre, or the dead-house. Then, again, who does not remember the "operating coats" of the consulting staff, fine old crusted garments of peculiar cut, and ornamented with many an honourable stain, of which the wearer is possibly as proud as is the fox-hunter of the old school of those marks which show that his "pink" has seen many a day's work. Surely all this should be reformed. It is the custom in some of the Scotch hospitals to compel the dressers to wear brown-holland blouses whenever they are on duty in the wards, and we recommend all surgeons, house-surgeons, dressers, and "sisters" to follow this wholesome sanitary example.

THE PRESCRIPTION OF UNUSUAL DOSES.

THIS subject was discussed at the recent meeting of the British Pharmaceutical Conference at Bradford. The discussion was opened by Mr. Hampson, who made a proposition for a sign to be used by medical men to mark unusual doses in prescriptions. With slight exceptions, the paper of Mr. Hampson, and the views of the various speakers, were characterised by good judgment and moderation. There was a wise abstention from any detailed allusion to the recent case at Ramsgate, which has been sufficiently criticised, and to which we need not revert. Mr. Hampson's proposition, though not original, is very worthy of consideration. We ourselves made a similar proposition some weeks ago. The sign recommended by Mr. Hampson is the initials of the prescriber written in brackets immediately after the unusual dose: thus—

Tr. Digitalis, 3ss. [J. R. L.]

He further said that the address and name of the prescriber on every prescription would be an inestimable advantage, and that this is the invariable practice in the United States. The general opinion of the Conference was in favour of the sign suggested by Mr. Hampson. The medical profession, we feel sure, would be willing to adopt any reasonable proposition on the subject. Fellows and members of the College of Physicians are required by its bye-laws to write on their prescriptions the name of the patient, the date of the prescription, and the initial letters of their names. We see no objection to attaching the full name of the writer, which is the habit of many practitioners. The use of some sign to relieve the mind of the pharmaceutist in the case of unusual prescriptions is clearly desirable. It is the custom in Germany and Austria to use a point of exclamation. The College of Physicians should take up the question, and recommend a sign. Meantime there can be little difficulty on the part of any prescriber in indicating that he really means any dose which he prescribes, either by attaching his initials or, what seems to us less ostentatious and equally efficient, by underlining the quantity.

RESEARCHES ON THE HISTOLOGY OF THE LUNG AND ON PNEUMONIA.

FRIEDLANDER has lately published a small pamphlet in which he has given the results of his observations on some points of the normal anatomy of the lung, and upon the pathological processes occurring in pneumonia established by section of the pneumogastric nerve in the rabbit. His inquiries into the latter point were chiefly undertaken with a view of determining whether the pneumonic inflammation was due to the entrance of fluids and solids into the respiratory passages consequent upon the paralysis of the glottis, or whether it was a neuro-paralytic phenomenon. He finds that numerous dark-red spots, not containing any air, make their appearance within six hours after section of the vagi in the vicinity of which the tissue, though still capable of being inflated, is infiltrated with bloody serum. Sections of these parts which, after having been inflated, have been preserved in alcohol, show that at such points the alveoli are filled with a fibro-granular mass, red blood-corpuscles, and a considerable number of very large coarsely-granulated elements. These last-named large cells, which are for the most part more or less spherical in form, though sometimes elliptical or polygonal, are either firmly adherent to the wall of the alveoli, or lie free in their cavity. Their protoplasm occasionally contains, besides the ordinary coarse granules, brown and black pigment-granules, as well as red blood-corpuscles, and when examined on a warmed microscope stage, exhibits distinct changes of form, but none of locomotion. These cells have already been observed by Colberg in the catarrhal pneumonia of man, and have been described by him as "swollen epithelial cells." In this view Friedländer appears disposed to coincide, regarding them as forms which are the direct consequence of the swelling of the normal epithelial cells in the serous fluid poured out and surrounding them. In favour of this view he advances the additional argument that similar forms of cells may be met with wherever, as in simple hypostasis or in multiple capillary embolia, a sanguinolent serous fluid is poured out into the alveoli. Similar forms may also be encountered in the lungs of rabbits rendered œdematous by a clip placed on the aorta ascendens, and even in pieces of perfectly fresh lung immersed either in serum or in some other indifferent fluid. On the other hand, such cells are never met with in healthy lungs if immediately after removal from the body they are immersed in alcohol, or if the bronchiæ are injected with glycerine-gum. In such cases the cells lining the alveoli present their normal aspect. Hence it may be fairly concluded that these large cell-elements represent the normal cells lining the alveoli swollen by the imbibition of a watery fluid, and as their formation is due to purely passive conditions, he is not disposed to believe that they play any important or active *rôle* in the inflammatory processes, as some have maintained. In the later stages of the pneumonia caused by section of the vagus—that is to say, about the twelfth hour—Friedländer found, in addition to the above, a large number of lymph-like corpuscles, which

for the most part possessed many nuclei, not only in the cavity of the alveoli, but in the connective tissue surrounding the vessels and bronchiæ, whilst the tissue of the septa was tolerably free from them. At the same time white blood-corpuscles accumulated in the layer of blood lying next to the wall of the small arteries and veins, and these, or the lymph-like cells, escaping into the cavity of the alveoli, converted the whole lung-tissue into a compact, dense mass, from which sections could be readily made. After a little while the lymphoid elements and swollen epithelial cells underwent fatty degeneration, a sufficient proof that the latter do not actively participate in the inflammatory process.

OUR LITTLE WAR.

A CERTAIN amount of anxiety seems to prevail in regard to our arrangements for the "little war" in which we are engaged on the Gold Coast. People ask themselves whether they may anticipate a repetition of the old red-tape system which led on previous occasions to so much confusion, if not actual conflict, between different departments. Seeing that the expedition involves so many questions of a sanitary and medical character, we were curious to ascertain whether the suggestions of the medical service had met with due consideration, and we are glad to believe that such is the case. It is but a matter of justice to the Government to state that if the undertaking fails in any particular, it will not be for want of consideration and foresight. It is well known that before the general in command left this country he held long and frequent conferences with the head of the medical service, and it is understood that they are thoroughly in accord as to the nature of the undertaking and the best way of avoiding or diminishing the risks attending it. Anyone reading Sir Garnet Wolseley's little "Soldier's Manual" must have perceived that he is well "posted up" in all the modern views of medical organisation for the field, and being an eminently practical, clear-headed man, we may be sure that all the medical and sanitary requirements have been well considered. Moreover, the acting head of the medical service has had very great and varied experience to guide him, for, in addition to his services in connexion with our own wars, he has enjoyed the opportunity of witnessing what was done by the Americans in their very big one, when everything that energy and ingenuity could suggest was brought to bear in accomplishing their ends, even down to the rapid construction of railways for the transport of their troops. It is, we think, easy to conclude, by the selection of officers, combatant and medical, by the remarkable variety and character of the supplies, by the equipment and clothing of the men, and by the preparation of a large hospital ship, that the campaign is not to fail for want of energy and foresight on the part of the responsible heads; and we believe ourselves entitled to state that all reasonable and due weight and consideration have been extended to every good and practical suggestion, let its source have been what it may.

GAS-POISONING.

THE melancholy accident at Wellington College, whereby a young lad was killed by the escape of coal-gas into his sleeping apartment, brings powerfully to our notice the fact that we employ a most potent poison as one of the necessaries of modern existence. The poor boy was found dead in his bed. He probably had fallen into that deep slumber which children alone enjoy, and from which the noxious and odorous atmosphere which killed him did not unfortunately arouse him. Death from the inhalation of coal-gas seems to be painless; and the victims of it have generally been found in some attitude of repose, their countenances retaining all the placidity of slumber. The sufferers do not seem to be tormented by the terrible sensations of suffocation; for it has been observed that it is rare to find any indications of an attempt to escape the impending fate. The most noxious ingredient of coal-gas is stated to be carbonic oxide, of which most samples of gas contain from 7 to 8 per cent. by volume. That this gas is intensely poisonous—far more so than carbonic acid—is well known; it is, in fact, stated to be the most poisonous of all the gases properly so called. M. Tourdes has shown that an atmosphere containing one-fifteenth of its volume of pure carbonic oxide will kill a rabbit in twenty-three minutes, and that half this amount produces death in thirty-seven minutes. Death is produced, according to Claude Bernard, by a paralysis of the red corpuscles, which brings to a standstill their power of absorbing and carrying oxygen. Prof. Christison, in his work on Poisons, states "that the powerful odour of the gas (coal-gas), when it accidentally escapes in the night-time, generally awakes very soon those who are exposed to inhale it." It is fortunate that such is the case; and this and similar facts are strong arguments against the introduction of inodorous gas for illuminating purposes. This accident, too, brings to mind the imperfections of modern building. It is strange that in the construction of houses we so seldom find any arrangement for the proper, safe, and wholesome combustion of gas. What would be said of a builder who omitted fireplaces, flues, and chimneys from the plans of his buildings, and who warmed his houses by pans of coals in the very centre of the rooms, leaving the visible and invisible products of combustion to escape as best they could? It is not probable that in one house in a thousand any proper arrangement would be found for the combustion of gas, or any flues whereby the products of such combustion could escape. Gas is gradually getting into disrepute: it flares, it roars, it flickers, it smells, it tries the eyesight, and spoils all decorative furniture; and, as a result, we find that oil is displacing its powerful rival in the houses of all who can afford to be luxurious. Who is to blame for this? Surely not solely the gas manufacturers, but the builders as well, who construct houses without giving any thought as to the mode in which it is to be lighted.

THE THERAPEUTICS OF SPORT.

OUR contemporary, the *Field*, has lately made some very excellent and trite remarks on sport as a means of keeping and getting health. It laments that people are too prone, now-a-days, to "go abroad" for their autumn holidays, or else to spend their time at dull watering-places in the vain pursuit of something to kill time, instead of seeking more active and more healthful recreation on the Scotch moors or beside the salmon-stream. It hints, too, that the medical profession is hardly alive to the value of sport, and says:—"For our part we are quite convinced that doctors who have to deal with cases of malaise or marasmus would often find it of benefit for their patients to breathe the air of the Scotch hills and come within the influence of the mountain breeze. There is too much of the Bath chair in modern medical treatment." Without questioning the exact meaning which the writer in the *Field* attaches to "marasmus," and without admitting all that is implied, we must, nevertheless, grant that the truth is self-evident, and we do, in fact, question whether perfect health is obtainable unless some out-door recreation is allowed to go hand-in-hand with the more serious business of life. We look upon sport rather as a means of preserving health than of restoring it when lost, and we think that professional and business men in town are far too prone to disregard healthful recreation. It is not the three weeks' shooting

or fishing to which we allude, but the oft-recurring weekly "outing" to which all who have wisdom and the necessary means treat themselves. The man of business, or the barrister or doctor, who is able to get a day's hunting once a week more than makes up for his lost time by the additional vigour with which he prosecutes his labours on the remaining five or six. Many of the foremost men of our own profession have been and are noted for ardour in the prosecution of field sports. There is one sport of a mild kind which is open to many of our profession—viz., driving; and there are several of our foremost London practitioners who are noted for the dexterity with which they drive their mail-phaetons. We have always silently admired the wisdom of these medical Jehus. When a doctor leaves the harassing case, over which perhaps he has been sorely anxious, and takes the ribbons to drive to his next patient, he must, willy-nilly, get his nose off the grindstone, and the excitement of threading his way through the London thoroughfares must for the time drive away the cares of practice. His animated countenance is generally a striking contrast to that of his professional brother whom we see boxed in his brougham poring over his morning paper or his visiting-list.

DR. PURCELL AND THE ST. PANCRAS GUARDIANS.

THE St. Pancras guardians do not take at all kindly to their duty in regard to the suspension of Dr. Purcell. At the meeting of the board on the 25th ult. the following recommendation of the Visiting Committee was carried, in answer to the letter received from the Local Government Board at the last meeting:—

"That a reply be sent, stating that the guardians, having lost confidence in Dr. Purcell, exceedingly regret that the Local Government Board have removed his suspension; and they respectfully ask to be furnished with a copy of the communication forwarded to them by Dr. Purcell upon which their decision was based, and to inform them that Dr. Smith is still acting as his substitute in District No. 7."

Dr. Purcell's suspension has been already removed by the Local Government Board, and we presume that he is entitled to all the emoluments of the office. The guardians are not likely to gain anything by prolonging the correspondence on the subject. They have acted most unreasonably towards Dr. Purcell, and will not improve their position by their reluctance to retrace steps that should never have been taken. It is a fine question how far Mr. Smith is justified in doing the work of another medical officer recognised by the Local Government Board.

CHEAP DRUGS AND DISPENSARIES.

WE much regret to have noticed on several occasions lately the growing propensity of hospital and dispensary drug committees to ignore the skilled experience and representations of medical officers in the selection of drugs and medicines in favour of their own theory of *cheapness*. That this is a short-sighted policy and one eminently illustrating the homely proverb about "penny wisdom" is obvious to any person whose vocation places him in the position of a witness between disease and its remedy. We are sure we shall earn the thanks of the medical officers connected with hospital and dispensary practice when we point attention to this serious blot in the administration of medical charity.

As a mere question of economy—leaving the amelioration of suffering out of the question,—a very large sum would be saved annually if none but the best drugs were used, and a greater satisfaction would be experienced by the prescriber if he could always feel safe that the tools he uses were as far as possible "arms of precision."

The medical profession are proverbially a long-suffering race, and in the excess of their amiability they are naturally loth to disturb the friendly relations which properly should exist between the various officers of a public institution; but we happen to know cases in which cheap and inferior drugs have been purchased of so-called cheap druggists in opposition to the express protest of the medical officer.

It is reasonable to assume that every benevolent person who subscribes his money, and along with it the expression of one of the noblest sentiments of human nature—namely, charity, desires that his wishes should be carried out in such a way as to secure the greatest amount of good at the lowest pecuniary cost. We venture to suggest that "cheap" drugs are not calculated to attain that object.

MUSHROOM-POISONING.

THE mushroom-poisoning case tried a day or two since at the Old Bailey before Mr. Justice Denman presents several points of interest. A gardener of the name of John Hunt was indicted for the murder of Ruth Brooks, a servant in a tavern at Acton, to whom he had given a quantity of mushrooms, and from the effects of eating which she died. No evidence was forthcoming to show that Hunt was in the slightest degree aware of their poisonous nature, nor that he had any vindictive feelings towards the deceased; and the judge, in summing up, expressed his opinion that the prisoner ought never to have been indicted at all. A striking feature of the case was that a skilled witness saw nothing in the deadly fungi to distinguish them from ordinary mushrooms. And another curious point was the statement of the judge to the effect that such as grew under trees were dangerous, because, as he supposed, they were fed upon the roots of decayed trees, which were perhaps tainted with poison. His Lordship's observations, if correctly reported, will scarcely hold, for all fungi grow on decomposing vegetable and animal substances, and it is not very likely that a special poison should be taken up by the plants in this instance. A far more probable explanation is, that one or more of the fungi known to be poisonous had been eaten by the sufferer, though the remainder might have been of the common kind, and so far bear out the evidence of the skilled witness. On referring to Mr. W. G. Smith's admirable coloured drawings of edible and poisonous fungi, published by Hardwicke at a very cheap rate, and which should be in every country surgery and farmer's office, it may be seen that the Agaricus phalloides, the Agaricus vernus, the Agaricus (entoloma) fertilis, the Lactarius piperatus, the Russula fœtens, and the Agaricus (nebelonia) crustuliniformis, might one and all find their way into the mushroom-gatherer's basket without much suspicion; whilst the ingestion of a single specimen of the Agaricus fertilis would, if Mr. Smith's account of the quantity eaten and the symptoms observed in himself and two friends represents its ordinary effects, be quite sufficient to produce death.

THE WAY TO COOMASSIE.

Now that the view which we have all along taken is becoming the generally accepted one—viz., that the war with the Ashantees can only be terminated at Coomassie,—it becomes more than ever important to consider the best way of getting there, so as to avoid the dangers of the bush. The country about the neighbourhood of Accra, besides possessing roads, is much more open and healthy than that in the vicinity of Cape Coast; but an expedition to Coomassie, if undertaken from Accra as a base of operations, will obviously have to pursue a more circuitous route than one from Cape Coast. Before the war, supplies of all kinds were readily obtainable at Accra. The more extended our

information becomes the more convinced we feel that as soon as the traveller has penetrated to the higher lands of the interior, where, from the configuration of the country there is a natural drainage, he will find the climate a comparatively healthy one. The Akropong hills, for example, on the direct road from Accra to Coomassie, are said to possess an excellent climate, and these hills are easily reached from both the Volta and Coomassie. It is to be hoped that Captain Glover's force, proceeding up the Volta, will, at any rate, act as a powerful diversion, and enable Sir Garnet Wolseley, with the district to the east of the river Prah relatively free from Ashantees, to push on quickly to Coomassie. Everything depends on expedition, so that the campaign may be limited to the "healthy" season. Already the system of redoubts and fortified posts in the bush is being extended onwards in the direct line from Cape Coast to Coomassie, and considerable progress is being made in the road-cutting. There is no reason why we should not, if we prove successful in our undertaking against the Ashantees, as we have no doubt we shall, make it the occasion for opening out a new field for commercial enterprise; and although it is altogether too early to talk of establishing a sanatorium or redoubt on the site of the Akropong hills, we certainly ought not to consider ourselves debarred from utilising that or any other site more favourable to the health of Europeans than such places as Elmina and Cape Coast Castle.

A BAD START.

SIR GARNET WOLSELEY and his staff, by all accounts, have had a foretaste of what war can accomplish on a limited scale in the production of disease. There is no reason whatever to doubt the accuracy of the reports about the steamer *Ambriz*. While the unfortunate officers were undergoing a process of poisoning with lead and the products of the bilge in their own persons, their goods and chattels were being subjected to the deteriorating effects of a leakage through the deck. This is surely a very disgraceful occurrence, and we wonder who is to be made responsible for it. We understand that the cabins of the vessel were in full process of painting shortly before she left Liverpool, and that the paint had scarcely dried at the time Sir Garnet and his staff embarked. If the *Ambriz* is to be taken as the type of the West African mail steamers, it is clear that the authorities will have to look very sharp after any other vessels of the kind before employing them for the transport of our sick soldiers.

SANITARY MEASURES AGAINST CHOLERA.

THE epidemic is raging, with some severity, in Frankfort-on-the-Oder, Königsberg, Dantzic, Thorn, Ratibon, and Breslau. In the latter city the mortality has been considerable. In the cholera wards of the Dresden Hospital they burn the soiled body-linen, paillasses, and sheets. When not soiled, these articles are first disinfected, then boiled with absolute alcohol and carbolic acid, and lastly washed by machinery. The alvine dejections and vomited matters are received in saw-dust mixed with powdered charcoal, on which petroleum is then poured, and finally burned.

SOCIAL SCIENCE CONGRESS.

THE seventeenth Congress of the National Association for the Promotion of Social Science commenced at Norwich on Wednesday last. Lord Houghton, the President, in his inaugural address, expressed his regret that no practical progress had been made in the vexed question of sanitary reform, and said there could be no better evidence of the exigencies and embarrassments of the present state of things than the story of the Bill which Mr. Powell and Sir Charles Adderley introduced during the last session. The loss of this measure was, he thought, much to be regretted. It would have given to rural sanitary authorities the powers of making bye-laws and compulsory purchase, which were now only possessed by the urban authorities, and would have enabled the local government to supersede the sanitary authority in cases of non-performance or neglect.

THE BRADFORD MEDICO-CHIRURGICAL SOCIETY.

ON Saturday last this Society entertained a large number of the prominent members of the British Association to dinner, under the presidency of Dr. Bell. About eighty gentlemen sat down to dinner, including Dr. Carpenter, Professor Williamson, Drs. Harley, Rutherford, Crichton Browne, Campbell, Ryan, Brunton, Paterson, Struthers, &c. The meeting was in every sense successful.

PROFESSOR ROKITANSKY.

THIS eminent pathologist will soon be seventy years old, and, according to the standing rules, would have shortly to vacate his chair. It is, however, understood that an exception will be made in his favour, as the school of medicine of Vienna would sustain too heavy a loss by Rokitansky's retirement.

ON the 6th of next month there will be a meeting of medical men in Vienna to consider the various questions of military hygiene, especially in its connexion with voluntary help to the sick and wounded in time of war. An invitation has been sent by the three eminent Austrian surgeons, Billroth, Mundy, and Wittelshofer, to Beck of Carlsrhue, Esmarch of Kiel, Langenbeck and Loeffler and Virchow of Berlin, Stromeyer of Hanover, and Demarquay and Ricord of Paris, asking them to assist at the congress. The presidents of the Swiss, German, and French branches of the International Society for Help to the Sick and Wounded have also been invited to attend.

DR. FRANKLAND, F.R.S., in his report for the past month, states that the water delivered by the West Middlesex, Grand Junction, Lambeth, New River, and East London Companies was considerably superior in quality to the August supply, but that the water drawn from the mains of the Chelsea and Southwark Companies was inferior, on account of inefficient filtration. Living organisms were found in the Southwark water. Dr. Frankland points out the importance of careful filtration as a defence against the diffusion of zymotic matter.

DR. ANDREW WOOD is about to give us an autumnal surprise by publishing the result of a little more recreative literary labour. He has finished, and is about sending to the press, a translation of Schiller's tragedy of *Don Carlos*. It is not given to every medical man to be capable of such changes of occupation. From arduous and anxious practice to the pleasant and easy society of Horace is no slight change; but to leave Horace for Schiller, and epistles and satires for tragedy, is to show a capacity for good society which is in itself a recreation.

MR. ALFRED HAVILAND, medical officer of health for Northamptonshire, issued his first report a few days ago. Since his appointment upwards of 100 cases of fever had been reported to him, most of which could be traced to water contamination, sewage gases, and other defective sanitary conditions; while over 120 cases of well-pollution have been detected.

A DOCTORS' strike has lately taken place in Aargan, Switzerland. The Poor-law doctors held a meeting, at which their grievances were ventilated. From these we learn that their remuneration for attending on the indigent is now exactly what it was in 1804. The pay for a visit to a pauper patient two or three miles from Aargan is *sevenpence*. It was at the same time stated that a telegraph messenger gets one franc for the same distance—viz., threepence more than the doctor.

IN reply to a letter from Gwydyr House respecting the accommodation available for a possible visitation of cholera, many of the metropolitan boards of guardians have declared their readiness to receive cholera patients. In some parishes casual and receiving wards and sheds would be utilised, in others temporary hospitals, iron and otherwise, would be immediately constructed, in case of an outbreak of the dreaded disease.

THE mortality last week in London and twenty other large towns was at the rate of 21 deaths annually to every 1000 of the estimated population. In the metropolis the fatal cases of diarrhœa, which in the seven previous weeks had declined from 470 to 127, further decreased to 85. Three deaths were referred to simple cholera, and 28 to enteric fever.

THE Local Government Board have issued circulars to medical officers of health, pointing out that it is the duty of every officer to furnish a quarterly return of the mortality and sickness in his district, and requesting that no delay shall ensue in forwarding returns for the current quarter. A printed form of return accompanies each circular.

THE Archbishop of Canterbury formally opened a new hospital at Croydon on Saturday last. The institution, originally a private mansion, was converted and completed at a cost of about £10,000. Contributions are now solicited.

THE *Globe* announces that a memorial window to Dr. Jenner will shortly be placed in the parish church at Berkeley, his native place. Groups illustrating the miracles recorded in the New Testament will be placed on the window.

A CORRESPONDENT of the *Daily News* makes the thoughtful suggestion that disused stereoscopic slides should be sent to the wards of our hospitals, where they would greatly tend to relieve the monotony and weariness of the sick.

THE annual registration of gentlemen pursuing their studies at the eleven recognised metropolitan hospitals commenced on Tuesday last at the Royal College of Surgeons, and will be continued until the 15th inst.

THE inhabitants of Wolverhampton have called for a Government inquiry into the recent outbreak of enteric fever in the town, which has already caused fourteen deaths.

OF the medical men sent by the Austrian Government into Hungary to attend upon cholera patients, three have already fallen victims to the disease.

THE Greenwich guardians have applied to the Local Government Board for permission to borrow £35,000 for the erection of a new infirmary.

THE Local Government Board have sent Mr. J. Netten Radcliffe down to Liverpool to inquire into the circumstances of the recent fatal cases of cholera.

WE are requested to announce that the ophthalmic operations at St. George's Hospital will for the future be performed on Fridays at 1.15, instead of on Wednesdays, as formerly.

THE last accounts from New York state that seven hundred persons were stricken with fever in Shrevepont.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

MEETING HELD AT BRADFORD, SEPT. 17TH TO 24TH, 1873.

ON the second day Professor RUTHERFORD delivered his opening address, and dwelt upon some of the features which his department of biology presented. He took up successively microscopic anatomy, anatomy and physiology, the vital principle, change in physiological thought, medical education, the study of disease, brain functions, brain experiments by Professor Ferrier, and endowment of physiological laboratories. A warm vote of thanks was proposed by Professor BURDON-SANDERSON, who expressed a hope that valuable results would ensue from the efforts which the learned professor and others had made to systematise practical teaching. This was seconded by Dr. W. B. CARPENTER, who said that the old theory of the "vital principle" had been long since exploded; and he thought that it was scarcely necessary for Professor Rutherford to say a word against it. He however recognised a vital force, which was a different thing altogether.

A paper was now orally communicated by Professor FERRIER "On the Localisation of the Functions of the Brain," which unquestionably was the most important communication made in the section of Biology during the meeting. The large room was positively crammed during its delivery, which occupied nearly two hours. A series of diagrams of the brain of various animals were hung up, and, for the convenience of the uninformed, the author rapidly ran over the general anatomy of the brain. He then proceeded to narrate his experiments, first describing what disease had taught us relative to the functions of the organ. He showed the fallacies of previous experimenters who had removed portions of the brain; and referred to the experiments of Fritsch and Hitze, who obtained various movements of the limbs by passing galvanic currents through parts of the brains of dogs; they did not pursue these experiments, nor properly interpret the significance of the facts at which they had arrived. The author endeavoured to imitate the effects of disease on the lower animals by stimulating the different convolutions of the brain by electricity through the means of electrodes, and had operated on about a hundred animals of all classes, such as fish, frogs, fowls, pigeons, rats, guinea-pigs, rabbits, cats, dogs, jackals, and monkeys. The plan was to remove the skull and keep the animal insensible by means of chloroform, and so little was the operation felt that he had known a monkey with one side of the skull removed to awake out of the state of stupor from the chloroform and proceed to catch flies or eat bread and butter. On applying the electrode to a part of the superior convolution of a cat, the animal lifted its shoulder and paw on the opposite side to that stimulated; and by stimulating other parts of the same convolution the paw was suddenly brought back or put out as if to grasp something, or the animal brought forward its hind leg as if about to walk, or held back its head as if astonished, or turned it on one side as if looking at something. Again, a drawing up of the side of the face, a backward movement of the whiskers, a turning of the head, and a contraction of the pupil were produced by stimulating the various parts of the middle external convolution. By touching the lower external convolution certain movements of the angles of the mouth were produced. The animal opened its mouth widely, moved its tongue, and uttered loud cries, or mewed in a lively way, sometimes starting up and lashing its tail as if in a furious rage. He had found the same results occur from the like causes in the case of the other animals, in some of which the convolutions were not so clearly defined as in others, although by stimulation of what seemed to be

the corresponding parts the same results were obtained. The part of the brain which evidently was the seat of the memory of words was that part which governed the movements of the mouth and tongue, and here there was something to guide us. This was the case not only in the monkey, but, pathologically, in man and in the lower animals. He described the phenomena of aphasia, and it was a mistake, he said, to suppose that the faculty of speech was localised on the left side of the brain. The reason why an individual lost his speech when the left side of the brain was diseased was simply that most persons being right-handed were therefore left-brained, the left side of the brain governing the right side of the body. And this was *vice-versâ*; left-handed people had had aphasia on the right side of the brain becoming affected. For in his experiments, both sides of the brain produced the same effects with the electrode. He then alluded to the results of stimulating the different ganglia, into which we are unable to enter here.

DR. GEORGE HARLEY, in complimenting the author, alluded to the effect of mental emotion on the bodily functions, and the possibility of producing disease by simply acting upon the nervous system. Referring to phrenology, he said it was one thing to localise function in the interior of the brain and quite another to specify functions by manipulating the external cranium.

Dr. W. B. CARPENTER, in congratulating the author on the success of his experiments, also congratulated science on the possession of such an able exponent. He observed that the great work of the brain is done in the cortical substance, and in the author's experiments the first effect of the stimulus was upon that particular substance, producing an intensification of the circulation through it; being in that respect different from the ordinary stimulation of a nerve, which acts upon the fibrinous substance of the medullary matter of the brain. His explanation of the author's experiments was that a kind of ideational state was produced, of which the instrument is a certain portion of the cortical substance—that state acting not directly upon muscular movements, but upon the automatic apparatus, telling it to perform certain actions.

Dr. BRUNTON alluded to the faculty of will and self-restraint as distinguishing man from the lower animals, and said that this was probably situated in the anterior part of the brain. It was noticeable that criminals, who were deficient in that faculty, possessed only a small portion of brain in front of the head.

Professor BURDON-SANDERSON remarked that the stimulus in the author's experiments was, contrary to Dr. Carpenter's supposition, exactly like the ordinary excitation of a nerve, and the effect was produced in an extremely short space of time.

Dr. CRICHTON BROWN thought that the labours of Gall and Spurzheim ought not to be overlooked in a discussion on the localisation of functions of the brain—a principle which they distinctly enunciated. It was a curious fact that the author located the memory of words in the very part indicated by the phrenologists as the organ of language. He had witnessed the author's experiments, and was astounded at the marvellous manner in which the response was given (as predicted) by the stimulus applied.

A paper "On the Mode of Formation of Renal Calculi" was read by Dr. GEORGE HARLEY. In this communication, which has an important practical bearing upon treatment, the author laid down several laws as being applicable to all kinds of calculi. 1st. Calculi may occur at every period of life, from the cradle to the grave. 2nd. In all cases of constitutional concretions the amount of renal solids must be disproportional to the amount of liquids excreted. 3rd. That the deposition of a calculus in any part of the renal system is in every case due to some special local cause. The cause might be trifling and temporary, but still it must exist. Once, however, the concretion has begun to form, the original exciting cause is soon lost sight of, and the calculus goes on forming round its nucleus quite independent of the local condition which called it into existence. 4th. The vast majority of constitutional calculi, be their nature what it may, oxalate of lime, phosphate of lime, uric acid, xanthin, or cystin, have their origin in the kidneys. 5th. The colour of the concretion does not always depend upon the nature of which the substance is composed, but upon the presence of other colouring matters in the renal secretion. Uric-acid calculi, for example, vary in depth of colour according as the quantity of urohæmatin is small or great, just as crystals of sugar-candy owe their pink, yellow, or other tints to the pigment present in the water out of which they are crystallised. Phosphatic and cystinic calculi form an exception to this rule, by refusing to combine with extraneous pigments. 6th. There are three perfectly distinct modes in which the crystalloid material is deposited in the formation of calculi. The first and rarest form of calculi are those which consist of a monster crystal or an aggregation of monster crystals, and are only to be met with in the case of triple phosphates, oxalate of lime, and uric acid. The second is that in which a certain amount of colloid is united with the crystalloid material,—one in which it may be said that small crystals, separating from the super-saturated renal secretion, become entangled in mucus, tube-casts, epithelium-scales, or other colloid material, and by fresh aggregations around them gradually become closer and closer packed together, until they assume the appearance and properties of a compact concretion. The last mode of formation is by the aggregation of molecular atoms, on the principle of molecular coalescence from the union of viscid or colloid material with earthy or organic crystalloid matter, in the manner of the formation of the dental tissues and shell structures described by Mr. George Rainey. To these three different modes of constitutional calculus formation, the author gives the respective names of Crystalline, Crystallo-colloid, and Molecular Coalescence. In concluding, Dr. George Harley remarked that the calculi he had been describing must not be confounded with those which, for the sake of distinction, might be termed "accidentally acquired," such as vesical, which frequently have for their nucleus foreign substances, such as a pea, a barleycorn, a piece of bone, hair, wire, a fragment of sealing-wax, or a portion of catheter, the irritation of which excites the presence of tenacious mucus, blood, or even pus, with which the foreign body itself becomes coated, and in and around which crystalloid molecules and actual crystals are deposited, and form the calculus. Lastly, calculi are not always of uniform composition throughout; it varies at times with the different states of health of the patient. The centre of the concretion may consist of uric acid, then may come a layer of oxalate of lime, and over that again another layer of uric acid, or of phosphates. So that in a section of a calculus the clinical phases through which the patient has passed may be read as truthfully in the stone as the geologist can read the history of the earth in the strata forming its crust.

Professor BURDON SANDERSON made a communication on the electric phenomena which accompany the contraction of the leaf of Venus's fly-trap; and after showing that certain electrical phenomena which accompany the contraction of muscle and the activity of nerves also occur in those parts of plants which exhibit similar functions, he stated that Dr. Bennett's surmise that the leaves of Drosera possess the power of digesting, just as the stomach digests food, had been fully realised by observations made by Mr. Darwin, but not yet published. He then described, in illustration of his position, certain remarkable electric phenomena which he had observed in connexion with the contraction of the leaf of the Dionœa muscipula.

An active discussion ensued, in which Professors Balfour and Williamson, Dr. Willis, and the chairman took part, one of whom stated that we were entering on a new era in animal and vegetable physiology, and that these new channels of thought and inquiry were likely to lead to results as important as those produced by the spectroscope.

An allied paper preceded the foregoing, by Mr. A. W. Bennett, "On the Movements of the Glands of Drosera," possessing many points of great interest, into which our limits preclude us from entering.

"Remarks on Professor Huizinga's Experiments on Spontaneous Generation," by Dr. Burdon Sanderson, and "Microzymes as Partial Bionta, a discussion of recent views on the Origin of Life," by Dr. John Ross, were two papers that followed one another, in which the subject of spontaneous generation was considered. We refrain from going into either here, but the remark was made in the course of discussion that physiologists were hesitating before coming to a positive conclusion in the matter, at any rate until

more satisfactory information of a decisive nature had been brought before them.

"The Diverticulum of the Small Intestine in Man considered as a Rudimentary Structure" formed the subject of a paper by Professor STRUTHERS, who considered this structure in man and animals as a useless body. An active discussion followed. A paper "On the Anatomy and Physiology of the Elephant" was then read by Dr. MORRISON WATSON, and another by Mr. RAY LANKESTER, "On the Growth of the Ovarian Egg and the Early Development of the Cephalopod Loligo." These were followed by a paper "On the Development of the Armadillo's Teeth," by Mr. C. S. TOMES, in which the author determined the presence of an enamel organ in the fœtal animal, although in this, as in other members of the edentata, there is no enamel in the tooth of the adult; and the enamel organ precedes in appearance the organ which forms the ivory of the tooth.

Other subjects which were brought forward on the last two days, of which we can only enumerate the names, were "Some Abnormal Effects of Binocular Vision," by Mr. W. S. Davis; "Remarks on Ethnic Psychology," by Mr. Robert Dunn; "Report on the Antagonism between the Physiological Actions of Active Substances," by Dr. Fraser; "Report on the Heat of Arterialisation," by Professor Gamgee; "On the Action of Light on the Retina and other Tissues," by Drs. Dewar and Mackendrick; "Double Nerve Stimulation," by Mr. A. G. Dew Smith; "The Action of Alcohol on Warm-blooded Animals," by Dr. Binz; and "Physiological Researches on the Nature of Cholera," by Dr. Brunton.

The concluding meeting was held on Wednesday, the 24th September, when it was announced that the Association would meet next year in the town of Belfast.

CLAUDE BERNARD ON CALORIFICATION IN ASPHYXIA.

CLAUDE BERNARD has recently conducted a series of experiments on some vexed points connected with temperature in asphyxia, and at one of the last meetings of the Paris Société de Biologie, made the results which he has obtained the subject of a very interesting communication.

The eminent physiologist first gave the results of his experiments on animals in respect to asphyxia through suffocation. He stated that on tying the trachea of an animal the temperature would rise two or three degrees during the first five minutes of the operation, and then decrease. On the temperature of the blood being examined it was found that in arterial blood there was a sudden fall of temperature, followed by a rise, whilst in venous blood the initial fall of temperature was not observed. In respect to asphyxia through oxide of carbon, he stated the following results:—Rabbits were placed in an asphyxiating apparatus into which the gas, previously rendered cold, was introduced; after five minutes the animals fell down, and a decrease of temperature of two or three degrees was stated, and on returning to life they took a long time before recovering their normal heat. These results are contrary to those of Portal, and the conclusion is, that the animals poisoned by oxide of carbon die through privation of oxygen, the blood-globules being unable to get oxygen in their passage through the lungs.

Claude Bernard had thought that the blood-globules altered by oxide of carbon were unable to resume their normal properties, and ended in being destroyed. It was thus that the long duration of phenomena consecutive upon intoxication with coal-fumes could be accounted for. But the facts resulting from these new experiments have destroyed this hypothesis. When a rabbit is poisoned and then withdrawn from the apparatus before it has time to die, the spectroscope shows that all the globules of the blood are affected. After a short time, however, the two rays of hæmoglobin are again perceived, and in about three-quarters of an hour the oxide of carbon has disappeared. Consequently, there must exist some mechanism in the system by means of which the oxide of carbon is destroyed, since it is not eliminated, no traces of it being found in the gases breathed out nor in the urine.

Referring to another point of interest, Claude Bernard mentioned that M. Chenau, who had poisoned himself accidentally with oxide of carbon, had committed a mistake in ascribing the feeling of tearing and burning which he experienced to the sudden oxidation of the oxygen of the blood—oxidation producing condensation of oxygen and a considerable development of heat (6000 calorics to a litre of oxide of carbon). This theory, said the eminent physiologist, was inadmissible, as intoxication with oxide of carbon produced, on the contrary, a fall of temperature. He had examined the venous blood of all the organs after asphyxia through oxide of carbon, and had everywhere found it red; but on galvanising the sciatic nerve he had produced a tetanic condition of the corresponding limb, and the venous blood of it had become black. Claude Bernard concluded his communication by advancing the hypothesis that perhaps under the influence of muscular activity the oxide of carbon may burn out—a question which he intended to make the subject of his forthcoming experiments.

Correspondence.

"Audi alteram partem."

CEPHALOTRIPSY.

To the Editor of THE LANCET.

SIR,—In the last number of your valuable journal, page 450, Mr. Carey has related a case of cephalotripsy. In speaking of the difficulties which presented themselves in it, he says, "I thought of Dr. Braxton Hicks's plan of picking off the calvaria and canting the base" of the infant's head.

The plan of placing the infant's head after it has been reduced to its utmost limits by craniotomy in the most favourable position to pass through a highly distorted pelvis does not belong to Dr. Braxton Hicks, but it was proposed and practised by the late Dr. Hull, physician to the Manchester and Salford Lying-in Hospital. See his observations &c. on the Cæsarean operation. Dr. Hull, after demonstrating the fallacy of Dr. Osborn's statement that he extracted a reduced head through the pelvis of Elizabeth Sharwood by so placing it edgeways that one side came first, by showing that the other side or edge must necessarily be placed on the neck, which with its fleshy parts and the vertebræ rendered it quite impossible for the operator to drag the infant through the pelvis having only the dimensions stated by Dr. Osborn to exist.

Dr. Hull proved, both by demonstration and practice, that the shortest measurement of an infant's head after its most extreme reduction by the perforator and crotchet was by bringing down its anterior portion, and so converting it into a face presentation.

This operation I have successfully performed many times when I had the relative charge over the patients of the Manchester and Salford Lying-in Hospital.

I am, Sir, yours respectfully,

THOMAS RADFORD, M.D.

Manchester, September 27th, 1873.

SPORADIC CHOLERA.

To the Editor of THE LANCET.

SIR,—Just now, when our shores are threatened with an invasion of cholera, the following sporadic case may be interesting as pointing out that when the epidemic influence is at work direct contact is not essential to the propagation of this disease. On the 13th of this month I was sent for to the coast-guard station at Netley, to see a boatman, Henry S——. I found him suffering severely from cramp in both legs and bowels, violent sickness, and frequent light-coloured liquid stools. The eyes were sunken, face livid and cold, pulse hardly perceptible, hands and nails quite blue, and he had the peculiar high-pitched, almost

whispering voice so marked in cholera. No urine had passed for some hours, and there was none in the bladder. I had his legs well rubbed and wrapped in hot mustard and water, a large poultice over abdomen, and stimulants, beef-tea, and arrowroot given at short intervals when they could be swallowed, and thin cold arrowroot *ad libitum* to quench thirst. On consultation with the chief officer in charge of the station, Mr. Giles, R.N., I found that there were sixteen adults and upwards of forty children in the buildings; it was therefore most important to move the patient. We accordingly waited on Colonel Gordon, Commandant of the Royal Victoria Hospital, who received us most kindly, and borrowed a tent, bedstead, and utensils, and had it pitched 150 feet in rear of the coast-guard buildings, with a hole dug some distance from the tent to put the patient's excretions in. He was moved into the tent with two men told off to nurse him. Disinfectants were freely used, the people encouraged, and ordered to live well. A mixture of soda, bismuth, ammonia, and chloric ether was given occasionally. In the evening reaction had well set in, but no urine. On the 14th he had slept at intervals, and all the symptoms were more favourable. On the morning of the 15th a small quantity of dark-coloured urine was passed. From this time he steadily improved, a dose of castor oil doing good service. No other case has occurred, and the station is very healthy. S—— is a very steady man, and had only been back a week from the summer cruize of the reserve squadron. He had not been near any infected place, but since his return had performed the usual coast-guard duties.

I am, Sir, yours faithfully,

THEOPHILUS W. TREND, M.R.C.S.E.,
Admiralty Surgeon.

Raeberry Lodge, Southampton, Sept. 30th, 1873.

THE GRATUITOUS AND PROVIDENT SYSTEM IN NORWICH.

To the Editor of THE LANCET.

SIR,—A letter appears in your journal of Saturday last, under the heading "The Gratuitous and Provident System in Norwich," in which it is stated that "two of the most eminent medical men in Norwich *give their services as consultants*." I presume this refers to Mr. Cadge and myself, who have been asked by the aggregation of clubs called the "Medical Institute" to see members of their society requiring a second opinion, when requested by their medical officer to do so. Without entering into the merits or otherwise of the institution, it is well that your anonymous correspondent should be informed that the inference conveyed by his italicised words is incorrect, and that in all cases where our opinion is asked we receive the ordinary consulting fee of a guinea.

I am, Sir, your obedient servant,

Norwich, Sept. 29th, 1873. PETER EADE, M.D.

MEDICAL VOLUNTEERS FOR THE ASHANTEE WAR.

To the Editor of THE LANCET.

SIR,—I hear that a great number of army medical officers are volunteering for service on the Coast of Africa for the Ashantee war. Permit me to remind them of the treatment they will meet with if their health should break down and they should survive and return to England. Only six months' sick-leave is ever allowed to medical officers, and if after that period they are not fit for any service in every part of the world, they are put upon half-pay, a miserable pittance barely sufficient to keep body and soul together, and they are still further punished by not being allowed to count their time for promotion or retirement, and consequently their juniors go over their heads. So badly is the sick doctor treated compared with other sick officers in the army, who are often given two or three years' sick-leave on full-pay.

I remain, Sir, your obedient servant,

Sept. 28th, 1873. A STARVING HALF-PAY SURGEON.

MANCHESTER.

(From an occasional Correspondent.)

SEVERAL topics of interest have been agitating the profession in our city for some time past. A determined effort to arrive at a practical scheme for working the provident dispensary system has been recently noticed in your columns. The committee appointed to arrange the details of an efficient method of applying the principle to existing institutions is now drawing up the desired plan.

By the sudden death of Dr. Ritchie, recently appointed assistant-physician to the Royal Infirmary, a vacancy occurred, to which the Committee elected Dr. Dreschfeld. The new plan of election by a committee of thirty trustees of the infirmary, having the guidance, without vote, of four members of the medical staff, has already shown signs of being as unsatisfactory as the old plan. The staff of the infirmary, together with representatives from the Medical Society of the city, should be entrusted with the appointment of efficient officers to the charity. The present number of assistant-physicians and assistant-surgeons is quite inadequate to a satisfactory working of the out-patient department, and requires immediate increase, but many local reasons have concurred to defer completing the staff.

The new buildings of the Owens College are to be opened on the morning of Oct. 7th, with a prayer from the Bishop of Manchester, an address by the Duke of Devonshire, Chairman of the Governors, and the usual introductory oration by the Principal, Professor Greenwood. For the evening cards of invitation to a *soirée* have been issued by the Duke of Devonshire and the Governors of the College, and a brilliant attendance is expected to inspect the interesting objects and experiments which the staff of the College will have prepared for the curious of Cottonopolis. The new buildings, designed by Mr. Waterhouse, have been finished in a most substantial manner, and will provide the finest chemical and physiological laboratories to be found in any similar institution in England. The arrangement, suitability, and completeness of the portions assigned to each department reflect the highest credit on all concerned.

The new Medical School buildings are rapidly progressing towards completion, and will be ready for use by May or October, 1874. Until then Professor Gamgee, the newly elected Professor of Physiology, and several of the other lecturers, will be afforded space in the General College, in addition to the old school buildings in Faulkner-street. Some doubt has been entertained lest the distance of the new schools from the infirmary should prove a serious drag on the limited time at the command of the students, but a little management in the attendance of the staff of the infirmary will remove this obstacle.

The Committee of the Eye Hospital have decided to double the number of surgeons, and three vacancies are advertised. This is regarded here as a mistake, considering that there are now six medical men in this city almost entirely dependent on ophthalmic practice. The prospects for the new applicants to these provincial honours are none of the brightest.

Manchester, Sept. 25th, 1873.

PARIS.

(From our own Correspondent.)

THE epidemic is still on the decrease. From Sept. 16th to the 22nd there had been 103 deaths; whereas from Sept. 23rd to the 29th only 66 were stated, making a difference of 37. As to the particulars of last week's bill of mortality, they were furnished by Dr. Delpech at the Tuesday meeting of the Academy of Medicine, and ran thus:—Sept. 23rd, 12 deaths; 24th, 12; 25th, 12; 26th, 8; 27th, 6; 28th, 5; 29th, 11. Out of the total number the military hospitals furnished only 2 deaths, showing the kind of immunity which the army still enjoys, or at least its excellent sanitary condition.

In the civil hospitals there were reported, on Sept. 33rd, 17 new cases, and 6 deaths; 24th, 12 cases, 6 deaths; 25th,

5 cases, 7 deaths; 26th, 8 cases, 3 deaths; 27th, 7 cases, 4 deaths; 28th, 4 cases, 2 deaths; 29th, 10 cases, 5 deaths; in all 63 cases and 34 deaths. From the beginning of the epidemic to Sept. 29th, 257 patients have been treated in the hospitals, with 148 deaths and 45 dismissals.

Several interesting conclusions have been drawn from the above figures, and are worth being noticed. It has been observed that in every week the mortality has been higher during the first than during the last days, and the fact is attributed to the excesses in drink which a large portion of the Parisian workmen commit on the Sunday and Monday. Again, out of the total number of deaths it has been observed that the mortality in town has decreased from 65 to 30, whilst in the civil hospitals it has risen from 29 to 34. Dr. Delpech showed that this difference was due to the constantly increasing number of cases developed within the hospitals; thus, from September 16th to 22nd there were 27 such cases, and from September 23rd to 29th, 34. Obviously these facts point to the necessity of isolating patients much more than has been done hitherto. Already, at the Hôtel Dieu, Drs. Ball and Lionville have, on their own authority, taken a measure which it seems extraordinary has not been already carried out in all the hospitals. Instead of immediately sending patients affected with diarrhœa to the wards reserved for cholera, they are sent to a separate ward, where they are kept under observation.

The *Journal des Débats*, in an interesting article on this subject, relates the measures which have been taken by Dr. Champenois in one of the large military hospitals of Paris—the Gros-Caillou—in order to preserve the other inmates of the wards from the disease. All the convalescents have been sent to a separate pavilion, warm blankets have been distributed to all the patients, open fires are already lit in the wards occupied by those suffering from diarrhœa, dysentery, and typhoid; the exhausted are put into separate chambers and provided with a substantial regimen, and extensive use is made of disinfectants, whilst the choleraic wards have a special *personnel*.

Of course, judging from the decreasing course of the epidemic, it is generally hoped and believed that it will soon die out. Dr. Broxardel, at the last meeting of the Société Médicale des Hôpitaux, made some remarks on the present epidemic from this special point of view. He compared its course with the two epidemics of 1853 and 1865, and showed that, contrary to its two predecessors, the present one had developed rapidly, had caused a great many deaths from the beginning, and had decreased gradually. Thus the mortality during the first week of 1865 was 39, and in 1873 95; the second week in 1865 it was 34, and in 1873 147; the third week in 1865 it was 34, in 1873 76. In 1865, the mortality though comparatively low, did not diminish in a marked degree like the present one.

The "prefectoral" authorities have just published a code of instructions drawn up by the Council of Hygiene and of Salubrity of the Department of the Seine, in which various hygienic prescriptions are indicated for the good of the public. Thus the advice is given as soon as a patient is taken with diarrhœa to go to bed, cover warmly, and have recourse to warm tea, with a little brandy or rum, and enemata with pounded starch and six drops of laudanum. It is also recommended to keep the body, and especially the feet, warm; to wear flannel round the waist, to have regular habits and avoid excess in food, and especially stimulants. The instructions in respect to what is to be done with the dejecta of choleraic patients seem to be quite inefficient, and scarcely in keeping with the facts which have been observed abroad. Thus the ejecta must be, it is stated, mixed with from one-half to two and a half drachms of carbolic acid to a litre of water, or with a solution of chloride of lime or soda, before being thrown into the privies. It is also thought sufficient to place several plates with chloride of lime sprinkled with water in the room of a deceased patient; and, above all, it is mentioned that the linen need only be "steeped in water, bathed for a long time, and washed in water to which half a drachm of carbolic acid or five drachms of dry chloride of lime have been added, for every litre of water."

Notwithstanding all the precautions that are generally taken to make Paris healthy, such as cleansing and watering the streets, &c., much yet remains to be done, and the stench which one perceives in some of the more densely populated or industrial quarters of Paris is extremely offensive, and suggestive of mischief. As the *Journal des Débats* mentions, the tanneries, candle-manufactories, slaughter-houses, &c., should be specially surveyed. Thus, at the Hôpital St. Martin, the first two cases of cholera occurred in the two Paris Guards who had been posted at the slaughter-houses of La Villette.

Nélaton was buried on Tuesday last. A large crowd of medical and other friends met at the door of his residence, and accompanied his body first to the Eglise St. Pierre de Chaillot, and thence to the Père La Chaise. Deputations from all the scientific bodies to which he had belonged were present on the occasion, and dressed in official attire: thus the Academy of Medicine, the Academy of Sciences, &c. As he had been a Grand Cross of the Legion of Honour, there was a regiment of soldiers to do him the last honours. It would be too long to write a list of all the eminent personages who were present on the occasion belonging to the army, the Government, the profession, and the public at large. By the express desire of the deceased no speeches were made over his grave.

Paris, Sept. 30th, 1873.

Obituary.

M. COSTE.

THE unexpected death of Coste has been a cause of deep regret not only among the scientific circles of France, but throughout the public at large. Coste equally enjoyed the reputation of a most distinguished and practical *savant* and of a thoroughly honest and sympathetic gentleman. His exhaustive and enduring productions on embryogeny had gained him the highest position among the scientific men of his country, whilst his practical labours and results in pisciculture caused him to be regarded as a public benefactor. He had just recovered from a most painful disease, which had threatened to deprive him of sight, and he was busy at work at several important researches when he was carried off by this last malady. He was born in 1807, the same year as Nélaton, and he died only two days before his eminent colleague of the Academy of Sciences.

Coste began his medical studies at Montpellier, and was Chef de Clinique under the famous Delpech of that faculty. His first scientific labours were undertaken in co-operation with the eminent head of the Montpellier school, and were published under the joint signatures of the master and his disciple. These were his "Memoirs on the Development of the Embryo in Birds," published in 1831, and which obtained a gold medal at the Academy of Sciences; and another exhaustive essay on "Generation in Mammifera and on the Formation of Embryos" (1834–1838), which secured him the post of lecturer in the chair of Comparative Anatomy at the Paris Museum of Natural History. In the interval of these two publications Delpech and Coste had been sent on an official mission to investigate the epidemic of cholera in Great Britain (1832), and on their return published the results of their researches.

His lectures at the Museum were gathered into a volume, and published under the title of "Cours des Embryogénie Comparée," which is still the standard work on the subject in France, and contains all of Coste's original views and personal experience. In 1838 he was sent to Germany, in order to become acquainted with the investigations which had been carried on there on embryogeny, and at about the same time he published his well-known memoir on the "Ovology of the Kangaroo." In 1843 he was appointed to the chair of Comparative Embryology, which had just been founded at the Collége de France, and in 1847 he published his master-work "On the General and Particular History of the Development of Organised Bodies and of Gestation in the Human Species."

Coste by this time had acquired the reputation of one of France's most eminent *savants*, and as a crowning reward of his labours he was elected into the Academy of Sciences —of which he afterwards became president—and was appointed a Knight of the Legion of Honour. His researches

were afterwards more especially devoted to the subject of pisciculture, a field which he made almost exclusively his own, and in working which he conferred most lasting benefits on his country.

In 1852 the establishment of pisciculture at Huningue, in Alsatia, was constructed under his direction, whilst, later, the laboratories of Concarneau were founded for his special investigations. The practical consequences of these two model institutions and of Coste's individual labours in aquiculture have been incalculable, and it may be said that he peopled the seas and rivers of France with a living world. The bay of Arcachon is a striking illustration of the fact. It had become sterile and choked with worthless mud, and now, thanks to Coste, it is one of the most productive and lucrative oyster markets of the world. Coste was appointed inspector of the river and coast fisheries of France in 1861, and his labours as such were constant and most varied. One of the last departments which occupied his attention, and one of considerable importance for his country, was the immense sardine fisheries of the western coasts of France, which he considered open to a great many improvements.

Coste died poor, but has left a most valuable collection of specimens which he had prepared for his researches on embryogeny.

His works on pisciculture include a great number of memoirs, the principal of which are his "Instructions Pratiques sur la Pisciculture," published in 1853, and his "Voyage d'Exploration sur le Littoral de la France et de l'Italie" (1855). But we must not forget to mention perhaps the most important of these special publications—namely, his Report addressed in 1861 to the Emperor Napoleon, on the importance of maritime fisheries in connexion with the increase of the naval forces of France.

Medical News.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Sept. 25th :—

Churchward, Albert, South Penge-park, Anerley.
Rendall, John, Trinity-street, Borough.

The following gentlemen also on the same day passed their Primary Professional Examination :—

Golding, Reginald, St. Bartholomew's Hospital.
Hogg, Thomas B., Leeds School of Medicine.

At the preliminary examination in Arts held at the Hall on Sept 26th and 27th 108 candidates presented themselves, of whom 32 were rejected, and the following 76 passed and received certificates of proficiency in general education :—

FIRST CLASS (order of merit). — 1. W. A. Sykes. 2. C. F. Campe, A. E. Cracknell, B. J. Guillemard, and R. E. Inman. 6. J. L. A. Hope and W. Hugo. 8. W. J. Cant, D. Colquhoun, H. R. Dale, F. J. Driver, F. C. Gibbs, E. P. Hayward, W. J. Milles, and B. Rigden.

SECOND CLASS (alphabetical order). — R. W. Addems, A. Allen, N. Allsworth, W. W. Amsden, T. Baker, F. Bass, H. L. Bates, C. E. Beebe, A. S. Bradford, A. H. Bromilow, A. E. Clark, M. F. Cock, C. E. Cocksedge, C. Couzens, E. Cureton, L. W. Davies, W. C. Falls, W. Fowler, F. Frank, W. T. Freeman, E. Griffiths, J. L. Hall, J. T. Hay, W. B. Hodgson, H. Hopper, G. Hussey, N. Kingsford, H. J. G. L. Leith, H. J. Liebstein, M. E. Ling, A. P. Langley, E. D. Maddick, C. Maunder, J. Montford, T. P. Morgan, H. B. Noble, G. E. Palmer, W. J. Parkinson, C. Plant, J. R. Purdue, F. F. L. Robertson, H. J. Scott, J. S. Scriven, F. J. Shaw, H. G. Statham, H. O. Stuart, E. Tatham, R. C. Thomas, T. F. Vaisey, C. J. Vlieland, E. C. Waller, M. Waite, A. S. R. Wainwright, E. C. Warren, T. F. Watts, J. M. Wheler, P. H. White, W. R. White, F. Wiles, H. Wilson, A. L. Wing.

UNIVERSITY OF CAMBRIDGE.—Professor Humphry gives notice that the course of lectures on Practical Anatomy will commence on Wednesday, October 8th, at 9 A.M., and be continued daily. The course of lectures on Anatomy and Physiology will commence on Thursday, October 23rd, at 1 P.M., and be continued on Tuesdays, Thursdays, and Saturdays. The dissecting-room is open from October 1st.

CHANGE OF NAME.—The Queen has been pleased to grant unto William Phillimore Stiff, of Snenton, in the county of Nottingham, and of Uley, in the county of Gloucester, Bachelor of Medicine of the University of London, her royal licence and authority that he and his issue may take and henceforth use the surname of Phillimore in lieu and instead of that of Stiff.

THE Great Northern Hospital has received a fourth £1000 from "S. W. Y."

THE open Scholarship in Science at St. Bartholomew's Hospital has been awarded to Mr. R. Harold A. Schofield, of Lincoln College, Oxford.

SANITARY SCIENCE.—On Tuesday, the 7th inst., Prof. Cameron, Analyst to the City of Dublin, will commence a course of twelve lectures on sanitary matters, such as food, diet, clothing, ventilation, &c. The lectures will be delivered in the theatre of the Dublin Exhibition.

Medical Appointments.

ASHENDEN, C., M.R.C.S.E., has been appointed Public Analyst for Hastings.

ATHILL, R. C., L.R.C.P.Ed., has been appointed Medical Officer and Public Vaccinator for District No. 7 of the Tendring Union, vice Latten, deceased.

BERESFORD, Dr., has been appointed Medical Officer for the newly formed Selattyn District of the Oswestry Incorporation of the Poor.

BETHELL, A., M.R.C.S.E., has been appointed Medical Officer for District No. 4 of the Bridgnorth Union, and Public Vaccinator for District No. 2, vice Stuart, resigned.

BROWN, T. J. E., M.R.C.S.E., has been appointed Medical Officer for the Llanbister District of the Knighton Union, vice Covernton, resigned.

BURNETT, C., M.B., C.M., has been appointed Medical Officer for the Sandy District of the Biggleswade Union, vice Barnes, resigned.

CARMICHAEL, D., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Portree, and the Southern Division of the Parish of Snizort, Inverness-shire, vice Matheson, resigned.

CLARK, T. E., M.D., has been appointed Physician to the Bristol General Hospital, vice Fripp, resigned.

CULLINAN, W., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the Crusheen Dispensary District of the Ennis Union.

DAVIES, LL., L.S.A.L., has been appointed Medical Officer for the Llanallin District of the Oswestry Incorporation of the Poor, vice Wynne, deceased.

DE LA MOTTE, P. W., L.R.C.P.Ed., M.R.C.S.E., has been appointed House-Surgeon to the East Suffolk Hospital, Ipswich, vice Elliston, appointed Medical Officer of Health for the Ipswich Port and Urban Sanitary Districts.

FOOT, A. W., M.D., has been appointed Lecturer on the Practice of Medicine at the Ledwich School of Medicine, Dublin.

FOWLER, T., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the Parishes of Epping and North Weald Bassett, Epping Union, vice M'Nab, resigned.

FRESHFIELD, P. W., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for District No. 1 of the Tendring Union, vice Freshfield, resigned.

HAGGART, J., M.B., C.M., has been appointed Assistant Medical Officer to the Inverness District Lunatic Asylum, vice Pearson, resigned.

JONES, J., M.R.C.S.E., has been appointed Medical Officer for the Llanrug District of the Carnarvon Union, vice Williams, resigned.

KERSELL, A., M.R.C.S.E., has been appointed House-Surgeon to the York County Hospital.

MAGRATH, J., M.D., has been appointed Assistant-Physician to the East London Hospital for Children and Dispensary for Women, Ratcliff-cross.

PAIN, T. D'O., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Alne District of the Easingwold Union, vice Fail.

PRESTON, W., M.B., C.M., has been appointed House-Surgeon to the Lancaster Infirmary and Dispensary, vice W. Berry, M.R.C.S.E., resigned.

TUKE, J. B., M.D., has been appointed Morisonian Lecturer on Insanity at the College of Physicians, Edinburgh.

WALKER, J. S., M.D., has been appointed Medical Officer and Public Vaccinator for the Bucknall and Bagnall District of the Stoke-upon-Trent Union, vice Davis, resigned.

WOODBURN, W. H., L.R.C.P.Ed., L.F.P. & S. Glas., has been appointed Medical Officer and Public Vaccinator for the Broughton West District of the Ulverston Union, vice Morison, resigned.

WRIGHT, F., M.R.C.S.E., has been appointed Clinical Assistant at the West Riding Lunatic Asylum, Wakefield, vice Levinge, appointed Assistant Medical Officer to the Newcastle Borough Lunatic Asylum.

Births, Marriages, and Deaths.

BIRTHS.

FEGAN.—On the 22nd ult., at Charlton, Kent, the wife of Richard Fegan, M.D., of a daughter.

MATURIN.—On the 20th ult., at Cambridge-terrace, Avenue, Southampton, the wife of J. Maturin, Surgeon Army Medical Department, of a son.

ROWLANDS.—On the 6th ult., at Carmarthen, the wife of J. D. Rowlands, M.R.C.S.E., of a daughter.

SATCHELL.—On the 1st inst., at Argyll-road, Kensington, the wife of Walter A. Satchell, L.R.C.P.Ed., L.M., M.R.C.S.E., of a daughter.

SPENDER.—On the 14th ult., at Bath, the wife of J. K. Spender, M.D., of twins—a son and a daughter.

SYMONDS.—On the 28th ult., at Madeira Villa, Weston, the wife of C. J. Symonds, L.R.C.P.Ed., of a daughter.

TAYLOR.—On the 27th ult., at Queen-street, Scarborough, the wife of John Wm. Taylor, M.D., of a daughter.

WHIDBORNE.—On the 1st inst., at St. Aubyn-street, Devonport, the wife of Geo. Herbert Whidborne, M.R.C.S.E., of a son.

MARRIAGES.

DOUGLAS—SHAW.—On the 4th ult., at Whitby, W. T. P. Douglas, M.B., of Newbury, to Agnes Maria, daughter of the late John Shaw, Esq.

GELL—DAVISON.—On the 26th ult., at the British Legation, Darmstadt, Thomas Silvester Gell, M.D., of St. John's Lodge, Kensall-green, to Jessie Elizabeth, daughter of Frederick Davison, Esq., of Fitzroy-square.

RONALD—HUGHES.—On the 4th ult., at Aberffraw, Anglesey, Robert W. Ronald, M.D., of Crosshill, near Glasgow, to Emily Paget, younger daughter of the late John Hughes, Esq., of Tyddyndal, Amlwch, Anglesey.—No Cards.

DEATHS.

BISHOP.—On the 29th ult., at Strangeways, Marnhull, Dorsetshire, John Bishop, F.R.C.S.E., of Bernard-street, Russell-square, aged 75.

FRY.—On the 26th ult., Geo. Fry, M.R.C.S.E., of High Beech, Loughton, Essex, aged 53.

HAMMOND.—On the 12th ult., at Gloucester House, Fellow's-road, Hampstead, Louisa May, daughter of Charles Hammond, L.R.C.P.L., aged 5 years.

HIGHETT.—On the 26th ult., James Highett, M.R.C.S.E., of Sandown, Isle of Wight.

THURNAM.—On the 23rd ult., John Thurnam, M.D., Medical Superintendent of the Wiltshire Lunatic Asylum, Devizes, aged 62.

WORTMANN.—At Gibraltar, Alex. Wortmann, L.R.C.P.I.

Notes, Short Comments, and Answers to Correspondents.

SIR JAMES PAGET'S LECTURES.

WE have much pleasure in announcing that we shall next week publish the first of a series of Clinical Lectures by Sir James Paget, F.R.S., on "The Nervous Mimicry of Organic Diseases."

MORTALITY OF FLAX OPERATIVES.

FROM a report drawn up by Mr. Purdon, of Belfast, on the sanitary state of the mill hands in that town, we learn that their mortality from phthisis and other chest affections is as three to two when compared with the labouring and artisan class. Those employed in one part of the mills called the "preparing-room" suffer considerably from consumption, the annual death-rate from this disease amounting to 31 per 1000 of those engaged. There is little doubt that, although those employed in mills are more exposed to disease than the majority of those in other trades, yet a good deal depends on the manufacturer and the operative. Thorough ventilation and reduction of the hours of labour for the weak and young would diminish, we believe, the mortality; whilst, on the other hand, more regard to cleanliness, diet, and clothing among those employed would be advantageous. It is a curious circumstance that although the mill hands are perfectly aware of the deleterious nature of the air they breathe in the mills, and of the irritating action of the cotton floating in the atmosphere, yet they persistently refuse, especially the women, to use any kind of respirator. Mr. Purdon recommends that the wearing of the Baker respirator be made compulsory.

Mr. Wm. W. Oliver.—An accoucheur is not necessarily a medical man; but a very ordinary sense of honour should prevent an assistant who has signed the agreement mentioned from acting as an accoucheur.

Dr. Littleton Winslow's letter shall be published in our next impression.

A DIFFICULTY IN THE RECOVERY OF DEBTS OF DECEASED MEDICAL MEN.

To the Editor of THE LANCET.

SIR,—I have been named as one of the executors of a medical gentleman, deceased, and in that capacity have been endeavouring to collect debts due for his professional services, ascertained from his books, and recorded in his own writing by pen or pencil. Some parties refuse to pay, and I am told by the solicitor to the estate that we cannot recover the fees unless we prove that the visits were paid, or that the debt was acknowledged by the debtor. Of course we cannot prove the paying of the visits, for the only person who could do so was the deceased. We purposed to prove his handwriting, and that these professional services were recorded in his books, and many of the accounts furnished in his handwriting during his lifetime; yet we are told this is all useless. Now, Sir, I would beg to ask you is this really the law of the case? For if it is the sooner it is remedied the better. I know, strictly speaking, that the proof referred to is necessary in ordinary cases, and that it is attainable in nearly all of them; but in the case of the medical profession a witness beyond the physician himself is of rare occurrence. I do not know any other profession where this is the case, or where in the event of death a family are left so wholly in the hands of debtors; and I think if the law be as stated to me, the medical profession should seek means of having such a wrong rectified. Yours, &c.,

September 22nd, 1873. AN EXECUTOR.

J. A. M.—We know of no researches upon the composition of the blood in the various stages of cancer. The line of investigation suggested by our correspondent is quite worth pursuing, and some important results might be obtained. Neither would it be very difficult.

Beatrice.—Such questions should be determined by previous contract. The fare is generally paid, we believe, one way.

X. L. had better refer to the Students' Number of THE LANCET.

THE USE OF TITLES.

A Medical Student.—The use of the title "M.D." on the strength of a degree from the University of Philadelphia has been punished by a fine of £20; and the decision was confirmed, on appeal, by Baron Martin. The value of the title "LL.D." from the same University must be exceedingly small; but it is not our business to pronounce judgment on the taste or the moral sense implied in using it. The other qualifications do not justify the use of the title "Dr.," and according to the recent decision of a magistrate the use of a title other or higher than that properly attaching to the qualification is a breach of the Medical Act. The London College of Physicians forbids the use of the title of "Doctor of Medicine" by its fellows, members, or licentiates, unless they are graduates in Medicine of a University. The other Colleges mentioned have taken no pains to prevent the use of the title.

THE letter of *Mr. Henry T. W. Scott* arrived too late for insertion in our present number, but shall appear in our next.

A Constant Reader.—We believe the office named to be a very good office.

THE CLIMATE OF ALGIERS.

To the Editor of THE LANCET.

SIR,—Algiers, although much frequented by tourists, and people who reside abroad during the winter for pleasure rather than health, is not so much patronised by consumptives as it deserves to be. The temperature, although perhaps but little above that of many places in the South of Europe, is subject to much less variation and to no sudden falls, that of the coldest part of the day and of the night being almost identical. The average minimum temperature of last winter was 50·4° F. The following table is compiled from carefully collected and reliable statistics.

Average in the Shade.

Month.	Min.	Max.	Mean.
	°	°	°
January	48·5	60·6	54·6
February	49·7	62·4	56·0
March	50·7	64·7	57·7
April	55·0	7·3	63·7
May	59·0	76·3	67·6
June	65·1	82·4	73·8
July	70·3	87·6	78·6
August	71·6	87·8	79·7
September	68·0	82·9	75·5
October	62·6	76·0	69·0
November	55·8	69·0	62·4
December	50·4	61·9	55·7

The air is perfectly dry and warm, cold winds being altogether unknown; the rainy days are few, and the roads become dry in an incredibly short time after rain. The chief causes which have militated against it are, its distance from England, the dust, and the dread of a sea voyage. The latter exists chiefly in the imagination. Algiers can be reached from London in eighty hours by travelling through; and the voyage across the Mediterranean, which only takes thirty-six hours, cannot, provided fine weather be chosen, cause *mal de mer* to the most delicate. If there were no dust, Algiers would be perfect; but the city is certainly dusty, and dirty too; but complete immunity from this can be procured by a residence in the lovely suburb of Mustapha Supérieur, which lies on the hill-side above the city, and commands an extensive view of land and sea. Here are numbers of villas, in the gardens of which, under groves of orange, olive, and other trees, invalids who elsewhere would be confined to their sick-rooms, can breathe a deliciously pure and dry air within a few feet of their beds. The walks and drives in this favoured spot are truly lovely, and as free from dust as, nay more free than, English roads. The splendid scenery and the picturesque costumes and curious customs of the races of all kinds which are congregated there cannot fail to be an endless source of amusement to all; whilst for those who are strong enough to enjoy it there is very good shooting and other amusements within easy distance.

I remain, Sir, yours, &c.,

September, 1873. T. H. F. TOTHILL, M.R.C.P. ED.

ARMY MEDICAL SERVICE.

WE have been unable as yet to give to the documents that we have recently received from India the consideration they merit; but the subject shall have our early attention.

Mr. J. B. Hamilton.—The officer in question entirely exceeds his duty in acting in the way detailed. His conduct should be complained of to the guardians; and if this procedure does not secure redress, it might be worth while to ask a lawyer's opinion as to the libellousness of some of the remarks which the officer is said to have made.

Homer.—Our correspondent has been misinformed.

A SUSPICIOUS CASE.

To the Editor of THE LANCET.

SIR,—I beg to communicate the following case for insertion in your journal.

On Saturday last Silas J——, aged sixty-three, was seized at 10 A.M. with vomiting and purging, at first of food, but subsequently of the characteristic rice-water evacuations. Cramps came on, and I saw him at 2 P.M. He was then bluish, shrunken, cold, and the pulse extremely weak. Urine suppressed from the commencement. I ordered a mixture containing twenty drops of chloric ether and ten drops of Battley's sedative solution every two hours until relieved. After the second dose the bowels were stayed, and the vomiting became less and altered. On Sunday morning I found him very feverish, with weak pulse, and urine still suppressed. From that time no urine passed into the bladder, and he died at 2 P.M. to-day (October 1st).

No other case has appeared. The man was a farm labourer, and has not been off his own neighbourhood, which is four miles from Penzance. His wife has nursed cholera patients, and recognised the disease on its first appearance. Yours faithfully,

Hayle, Cornwall, Oct. 1st, 1873. GEORGE VAWDREY, L.R.C.P

Philanthropist.—There are in the United Kingdom several asylums for inebriates, information respecting some of which may be found in our advertising columns. How far a dipsomaniac is responsible for indulgence in his besetting sin is a question which lies at the very basis of legislation for the suppression of drunkenness. Our correspondent may refer to some remarks on the subject in THE LANCET of July 6th, 1872.

Mr. Robt. H. Lloyd.—As far as we can learn there is no English translation of Dr. Rotureau's work. It is considered a standard book, and may be procured of Hachette and Co., King William-street, Charing-cross, for 25*s.*, free by post.

A Constant Reader is thanked for directing our attention to Article 182. Article 103 has not quite the relevancy to the question that we supposed. There is nothing, however, in Article 182 to prevent the guardians giving a workhouse surgeon extra fees for unusual cases. A general power to this effect is given in an earlier article, and it is used by guardians who have the will to use it.

Mr. John Noble Bredin.—The letter is not suited for publication; but the conduct described seems to be very doubtful.

CONSULTATIONS WITH UNQUALIFIED PRACTITIONERS.

To the Editor of THE LANCET.

SIR,—Could you inform me if it is the rule for senior consulting physicians to a London hospital to meet in consultation unqualified men (knowing them to be unqualified), or is it only the "exception" in the East-end of London? Surely it cannot be the paltry fee that induces gentlemen of position and standing in the profession to be a cloak to the "quack," to the loss of those who have worked hard to obtain a qualification. If it is a recognised practice in London, the sooner examinations and diplomas are done away with the better. I am, Sir, yours truly,

September, 1873. SALOPIAN.

STUDENTS' NUMBER.

IN our list of Medical Teachers we omitted the name of C. Garrard, B.A., 24, Essex-street, Strand.

Spes.—Consultation with a bone-setter is decidedly unprofessional; but we doubt whether the Council of the College of Surgeons would, or could, take any action in regard to it. The punishment of such conduct consists in forfeiting the countenance of professional neighbours. B should have made a contract with A before introducing him to his other patients.

Mr. K. McNab, (Inverness.)—We do not send private answers. The gentleman should consult a physician.

WE are compelled to defer the publication of several letters until next week.

ERRATUM.—In Dr. Roche's paper on the Cure of Varicose Ulcer by Tanning with Babool Bark, the name *Kotree* was misprinted "Rotree" in three instances.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Jas. Hinton, London; Dr. Harley, London; Dr. Ogle, London; Dr. Thornton, Liverpool; Mr. Forster, Cirencester; Mr. O'Keefe, Cork; Dr. Cobbold, London; Dr. Walton, Reading; Mr. Halford, Liverpool; Mr. Smith, Manchester; Messrs. Stuart & Co., London; Mr. Cowell, London; Mr. Lloyd, Bristol; Dr. Trend, Southampton; Mr. Hammond, Hampstead; Mr. Hammerton, Ipswich; Mr. Johns, Clapham; Mr. J. Vincent, London; Mr. A. Kebbell, London; Dr. Chalmers, London; Mr. Scattergood, Leeds; Mr. Brookley, Glasgow; Mr. Evans, Wolverhampton; Mr. H. Taylor, Westenhanger; Mr. Phillimore, Nottingham; Mr. Holding, Lynn; Mr. Benson, Woodford; Dr. Wood, Cranbrook; Mr. R. Gray, Manchester; Mr. Clay, Birmingham; Mr. R. Wilson, Coldstream; Mr. Keene, Douglas; Mr. M'Munn, Wolverhampton; Mr. Cross, Epping; Mr. Adkins, Ashford; Mr. R. W. Ellice, Staines; Mr. Robinson, Uppingham; Mr. Hogg, Pendlebury; Mr. Berry; Mr. O'Connell, Bolton; Dr. Hovell, Clapton; Mr. E. Bellamy, London; Dr. Eade, Norwich; Mr. J. Willis, Tiverton; Mr. J. Johnson, Hertford; Mr. R. Kent, Tavistock; Mr. South, Burton; Mr. H. Denyer, Hampstead; Mr. Fisher, York; Mr. R. Archer, Bodmin; Mr. Phillimore, Swinton; Dr. O'Brien, London; Mr. W. Percy, London; Dr. Radford, Manchester; Mr. Mills, Coleford; Mr. Ashenden, Hastings; Mr. R. D. Connor, Cork; Dr. May, Maldon; Mr. Mickle, Conway; Mr. Wall, Bedford; Mr. Burman, Wakefield; Dr. Sheppard, London; Mr. Cater, Sittingbourne; Mr. Lloyd, Plumstead; Mr. Walter, Weymouth; Mr. H. Morris, London; Dr. James, London; Mr. J. Halford, Huntingdon; Dr. Nicholas, Wandsworth; Dr. Bevan, Watford; Mr. Symonds, Woolston; Mr. Johnson, Edinburgh; Mr. Watson, Wakefield; Mr. Wood, Chester; Mr. R. Henley, Ormskirk; Mr. Vawdrey, Hayle; Mr. Gowlland, London; Mr. Knight, Rotherham; Dr. Taylor, Scarborough; Mr. Toye, London; Mr. Armstrong, Newcastle; Mr. Scott, Ealing; Mr. T. Preston, Wakefield; Mr. H. Elkins, Sheffield; Mr. Wallis, Sutton; Mr. Major, Dudley; Mr. Moore, Minster; Mr. Elliott, Tamworth; Mr. Balfour, Hampstead; Mr. W. P. Hensler, Strasburg; Mr. Redmond, Darlington; Mr. Prince, Wigan; Mr. D. Webber, Buxton; Mr. Jeynes, Crayford; Mr. Graham, Leytonstone; Mr. Welch, Chippenham; Mr. Mowbray, Gorey; Mr. Layford, Holywell; Mr. James, Yeovil; Mr. Maturin, Netley; Mr. Roberts, Warrington; Mr. Porter, Newport; Mr. Woodburn, Broughton-in-Furness; Mr. Bedford, Strood; Mr. Anstie, Devizes; Mr. Scrivener, Colchester; Mr. Gates, Oxford; Mr. Ross, Calne; Mr. Whidborne, Devonport; Mr. King, London; Mr. Gardner, Bideford; The Principal of the Royal Veterinary College; N. G.; M.R.C.S.; Senex; Spes; The Medical Officers of St. Mary's Hospital; H. M.; X. L.; J. R.; A Starving Half-pay Surgeon; The Substitute; A Volunteer Surgeon; Iota; H. P. T.; Junior; &c. &c.

Journal of Mental Science, Dumfries Herald, Northern Whig, Bradford Telegraph, West Country Lantern, Bell's Weekly Messenger, Scotsman, Echo Shields Daily News, and *African Times* have been received.

METEOROLOGICAL READINGS

(Taken by Steward's Instruments).

THE LANCET OFFICE, OCT. 2ND, 1873.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 8 A.M.
Sept. 26	30·19	S.E.	50	53	89	68	47	...	Foggy
„ 27	30·03	S.E.	50	52	90	74	46	...	Overcast
„ 29	30·22	N.E.	47	50	77	61	44	...	Overcast
„ 30	30·13	N.E.	52	55	90	65	48	...	Fine
Oct. 1	29·98	S.E.	58	60	81	70	53	...	Overcast
„ 2	30·06	N.W.	55	57	...	...	54	...	Fine

Medical Diary of the Week.

Monday, Oct. 6.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations on the Eye, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ST. PETER'S HOSPITAL.—3 P.M. Expected Operations: Lithotomy, Lithotrity, and External Urethrotomy.

Tuesday, Oct. 7.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Oct. 8.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
CANCER HOSPITAL.—Operations, 3 P.M.

Thursday, Oct. 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
HUNTERIAN SOCIETY.—8 P.M. Dr. Sutton, "On some Cases of Typhoid Fever."

Friday, Oct. 10.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Oct. 11.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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